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stranger suns

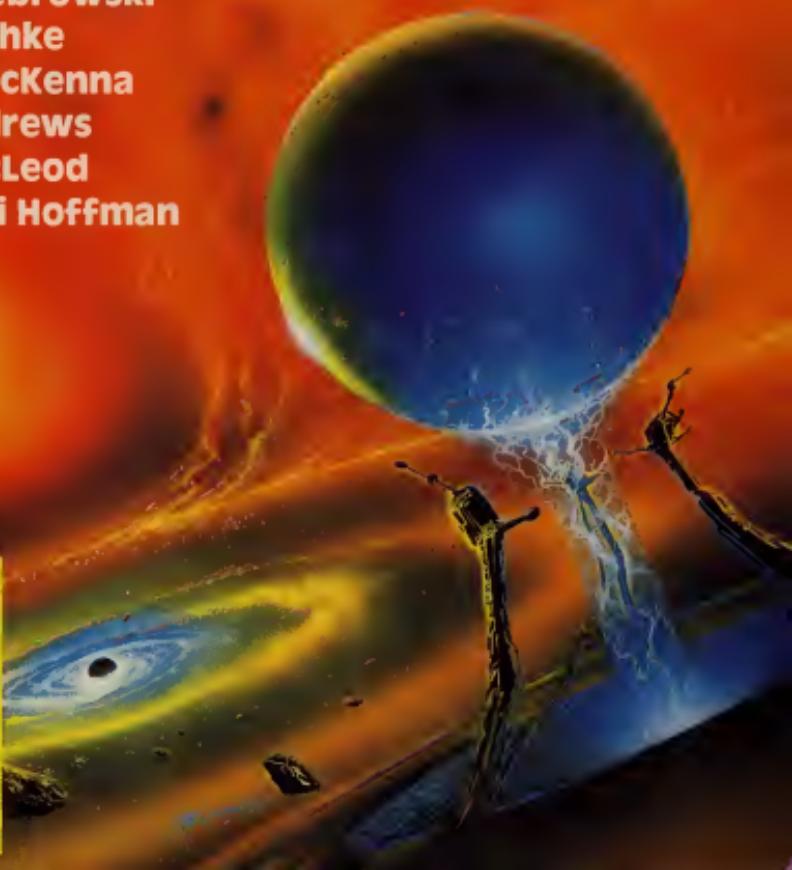
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Reflections

Robert Silverberg

This is not an era in which traditional courtesies are thriving, a matter that seems to be of concern only to geezers like me. (Although there is some interest on the part of the politically correct in maintaining courtesy to geezers, as readers of this column a couple of issues back will recall.)

A case in point is this business of casual use of first names.

Maybe it's not happening all around the country the way it is here. I live in California, which has always prided itself on its informality. A few weeks ago, at dinnertime, I picked up the telephone and heard a cultured male voice say, "I'd like to talk to you about making a contribution to the San Francisco Symphony, Robert."

Robert?

I'm a subscriber to the Symphony. Now and then I do make contributions to worthy causes, and I suppose the Symphony qualifies as one of those. But why does the Symphony think it's good policy to solicit contributions from strangers on a first-name basis? Or is that something it does only when calling science-fiction writers? Would it address the 78-year-old widow of some rich local industrialist as "Jane" or "Martha" while trying to extract dollars from her? Or the industrialist himself, if he's still among us: would he be "Jim" or "Phil"?

I'm afraid I wasn't very courteous in my reply. I told the cultured-sounding solicitor that I didn't like being solicited by telephone at dinnertime and that I especially didn't like being

called "Robert" by strangers looking for favors from me. Then I hung up.

Afterward, ruminating over the incident, I found myself wandering into a curious byway having to do with this whole first-name business, which is that I don't even like being called "Robert" by my friends. "Robert" is my professional name. It's the name I was born with, and the one I use on my stories. My friends call me "Bob." They've been doing that for more than forty years. I like it. (My first few stories were actually published under the byline of "Bob" Silverberg, before an older hand told me it sounded a little too casual.) Nobody who has known me more than ten minutes calls me "Robert," except for a few extremely inattentive people. Whenever I hear myself addressed as "Robert," I know that it's some stranger presuming on a relationship that doesn't exist.

And a lot of other science-fiction writers have the same quirk, or some variation on it. I was surprised, thinking about it for a time, how complicated this naming business really is.

The writer whose books appear under the byline of "Samuel R. Delany" is "Chip" to his friends, never "Sam" and certainly not "Samuel." He's very patient when people call him "Sam," but he doesn't like it. Edward John Carnell, the great British science-fiction editor of years gone by, was "Ted" to everyone — a common British diminutive of "Edward." Chelsea Quinn Yarbro is addressed as "Quinn," never as "Chelsea."

A. Bertram Chandler, the Australian science-fiction writer, was "Jack". among intimates, though at some point people began calling him "Bert." Not *Bertram*, ever. Another "Bert" of some time back was H. J. Campbell, the British writer and editor. ("Bert" was short for "Herbert" in his case.) And R. A. MacAvoy, who doesn't have to worry about being called by her first name by strangers who have read her books, because she hides it behind those initials, is "Bertie" to her friends, derived from "Roberta."

The preferred nomenclature can change. John Varley used to be "Herb" to his close friends — Herbert is his middle name, I think — but lately I've heard him spoken of mainly as "John," even by people who know him quite well. Isaac Asimov once had a nickname, but he loathed it, and said so whenever it was used, and eventually almost everyone forgot it. Robert A. W. Lowndes, the editor and writer, is "Doc" to his friends of the 1940s, "Bob" to people like me who met him a decade or so later. I never asked him why the nickname changed; and I never called him "Doc," either. (Another "Doc" was E. E. Smith, Ph.D. His first name was Edward, but he kept that pretty much to himself. Within the science-fiction world he was universally "Doc" — he wanted it that way — and I suppose outsiders such as symphony solicitors would have had to call him "Dr. Smith.")

Some writers are so fond of their nicknames that they turn them into real ones. Jack Vance's birth certificate reads "John Holbrook Vance," but he writes as "Jack" and everyone calls him that, and I wouldn't be surprised if he uses "Jack" as his formal first name on contracts and tax returns and such. His son's name is John also, but he's known as "John," which makes

things simpler around the Vance household.

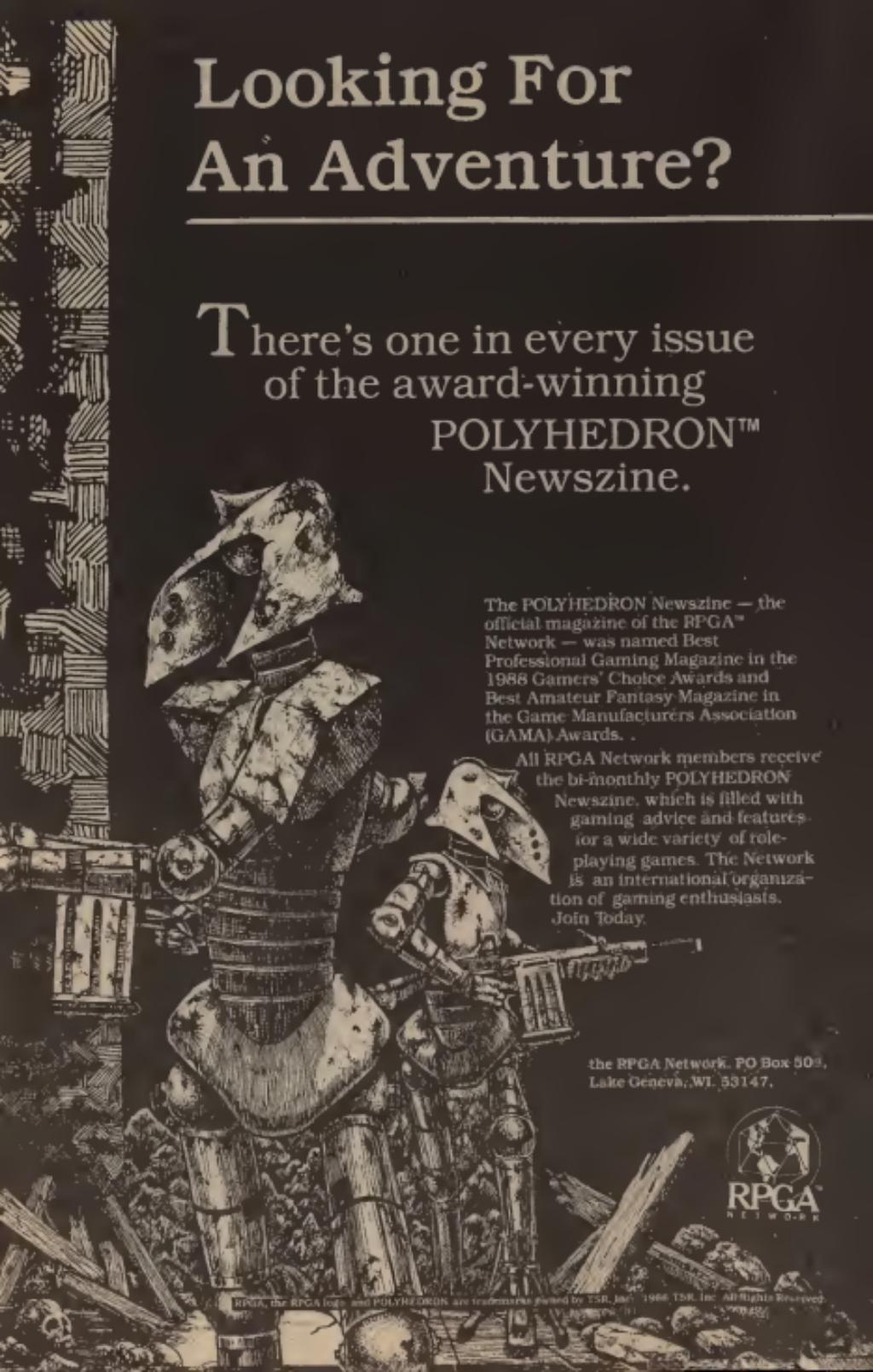
There are SF writers who never much mind being called by nicknames, or even, as I do, prefer it. I think here of "Bob" Sheckley, "Fred" Pohl, "Hank" Kuttner, "Ted" Sturgeon, "Phil" Dick, "Jim" Blish. And then there are some who are never called by nicknames even where easy possibilities exist: David Brin, David Hartwell, James White, Arthur C. Clarke. No Daves, Arts, or Jims in that bunch. (Like Asimov, Clarke once did have a nickname, not "Art," but it wasn't entirely a flattering one and after a time it passed into general oblivion.)

Randall Garrett was "Randy" for a long time, but eventually got tired of the sniggering implications of the nickname and let it be known that he wanted only his formal first name used. Most of us tried our best. In a somewhat similar way, Charles N. Brown, the publisher of *Locus*, weary of being confused with a comic-strip character, would rather be "Charles" than "Charlie," and perhaps he's succeeding at it; but I have thirty years of practice calling him by the nickname and I'm not doing a good job of making the transition to "Charles."

And then there's the case of Robert A. Heinlein. He was "Bob" to his friends for decades. When I met him in 1958, that was what everyone called him, and he was still signing his letters that way a few years later: I just checked my files to make sure. But somewhere along the way he turned into "Robert," apparently because his wife Ginny liked the sound of it better, and Ginny Heinlein is the sort of person who tends to get what she wants. As a "Robert" who'd rather be addressed as "Bob," I didn't find it came naturally to me to transform Heinlein from a "Bob" to a "Robert."

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So I went on calling him "Bob," which wasn't really proper any longer, and he suddenly started calling me "Robert," which wasn't appropriate either, and we muddled around with this first-name business for five or ten years before agreeing that neither of us really cared which version of our name the other used. Eventually, I got the hang of calling him "Robert" and he managed to remember that I was still "Bob" and all went smoothly thereafter.

F. M. Busby has a first name, but he doesn't like it. He answers to "Buz" among friends. Strangers, like solicitors for the Seattle Symphony, are forced to call him "Mr. Busby" because they don't know what else to use. (I do, but I'm not telling.) "Spider" isn't Spider Robinson's first name any more than "F." is Buz Busby's, but the symphony fund raisers up Vancouver way where he lives probably don't dare call him "Spider" when they phone him at dinnertime. (I know his real name, too, but I don't plan to let the Vancouver Symphony in on the secret.)

One who doesn't have to worry much about this whole nicknames business is Poul Anderson. "Poul" is not a name that lends itself to nick-naming. On the other hand, it has

other drawbacks. Nobody can pronounce it correctly — midway between "pole" and "pool," is what I was once told, but his wife says something close to "puhl," and presumably she knows — and it's very often misspelled as "Paul," besides. I suppose that's what the San Francisco Symphony panhandlers call him when they phone; and, because Poul is an innately courteous man, he neither hangs up on them nor corrects them nor reproves them for gratuitous use of his first name, or some semblance thereof. But life would have been simpler for him if his Norse progenitors had named him "Hans." It's not as mysterious or memorable a name as "Poul," but it's easier to pronounce, hard to misspell, and not readily adaptable into a nickname. Of course, an earlier Danish writer, fairly well known, has had the same first name, which might have caused some trouble for *our* Hans Anderson when he was starting his career, even if they spelled their surnames slightly differently. But the future author of *The High Crusade* and *The Boat of a Million Years* could have used his middle name to distinguish himself from his famous predecessor.

Hans William Anderson. Not a bad name for a science-fiction writer. I guess we'd all call him "Bill."



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STRANGER SUNS, Part 1
by George Zebrowski
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1. Industrial Park

Juan Obrian grasped the central guide bar and stopped his motion through the long tube leading from sleep quarters in the spinning wheel to the isolated work sphere, high above the hub. As usual, he had not slept well in the wheel's simulated half-g, waking up with the words *centrifugal sleep begets coriolis dreams* playing in his head, defying him to guess their meaning. They still seemed to mock him as he floated in place and peered out at the other components of the deteriorating industrial park orbiting a choking, warming Earth that could afford only the most obviously practical projects. Of the thirty bunched zero-g spheres, half had been empty since 2010. Four shuttles, abandoned six years later for lack of maintenance, drifted against the glow of early morning in the Pacific.

He feared the slow dying of devotion within himself, the loss of his feeling for the work of science, which he had once hoped would liberate him from the mill of power, greed, and survival that sooner or later enslaved most people; even on the high road of ideals, death still waited along the way. Liberation was beginning to look like an open grave.

He pulled up to a viewport so badly pitted by cosmic dust that it was impossible to see out. He tried to see a chaos pattern in the complex etchings, and was reminded of a letter by a Russian named Tasarov in a math journal, linking chaos and probability theory in a novel but untutored way. There's always a choice to do your best, he insisted to himself.

He pushed over to the other side of the tube, and watched the regular shuttle dumping its hundred-thousand-pound load of radioactive waste into the last containment sphere. When it was sent on its way into the Sun, they would start filling the zero-g work spheres, which were now too old to renovate.

He grasped the center bar again and pulled himself forward toward the door to the control room. Get a grip on yourself, he told himself as he reached it and pressed his palm to the key plate. We're all good people up here. Hard workers, all ten of us. Better times may come.

The door lurched ajar, then slid open. He pulled himself inside, and tried to seem cheerful as he came up behind the stocky figure of his friend.

Malachi Moede turned from the control panel and said, "Just about ready to use again."

Juan smiled. Malachi floated up, slipped a smoke from the pack in his shirt pocket, and scratched the cigarette on the low ceiling. The tip glowed red against his black skin as he took a drag, then exhaled toward the ventilator intake. "I'm quite sure it will work perfectly," he said in his subdued British accent, which made even his most pointed remarks seem understated.

Juan recalled again how often he had been reminded that his detector was not relieving the choke below or opening Sunspace for industrial

development. The complaints reminded him of his dead father, who would have said that his son had built a toy with other people's money for his own amusement. "Maybe we'll skip a few growing pains if this rig puts us in touch with our alien brethren." The bitter disbelief in his voice disturbed him.

Malachi smiled, took a deep drag, and held the smoke for a moment before releasing it toward the grille. "Possibly the tachyon beams are very tight and miss our rig. We'll have to search more of the sky."

"Or no one is sending."

"We couldn't say that even after searching the whole sky."

"Maybe it's the rig," Juan said, suppressing his desolate mood.

"I checked it from top to bottom today. Mind if I stay for part of your shift?"

Juan nodded, slipped into the control seat, and strapped in, then opened the gyro controls. The screen's dark-blue eye was blank as it came on; audio was silent. The magnetic field was a still pond waiting for a pebble to drop in. He reached out with a kind of lonely love and prayed for a faster-than-light particle to be absorbed, resonate with atomic particles in the field, and show up as an unmistakable jiggle on the display.

Malachi's hand touched his shoulder. "Don't take it so hard, dear chap. You stare at that thing as if expecting to see into the mind of God."

Maybe there was no one out there at all, Juan thought, and humankind was alone in the universe. His project had only added a tachyon silence to the radio silence of the universe. He had built a tachyon detector that did not detect tachyons, and that would be enough for Titus Summet to close it down.

He switched to a view of the shuttle pulling away from the dump sphere. As the orbiter dwindled, he found himself almost sympathizing with the ridicule that had been hurled against the tachyon project. Trying to eavesdrop on alien civilizations in the hope of picking up tech tips was like expecting to inherit wealth without knowing if one had rich relations. The basic scientific work for the detector was decades old; it would not yield new science without tachyons. A world fighting rising oceans, deforestation, ozone depletion, lack of clean air and water, and an increasingly better organized criminal class could not afford altars to uncooperative gods. The cost of medical care for the aging, for the treatment of immune-system diseases, and the monitoring of the millions of drug-damaged individuals was increasing geometrically, as was the population. The only thing saving his project was its modest cost compared to the big ground-based projects.

"Maybe I need a rest," Juan said as he stared at the south polar ice cap. It was bright in the sunlight. Clouds veiled the South Pacific. From a thousand kilometers out, no scars showed. A feeling of precariousness came over him. Something had dared to distinguish itself from the darkness — a vast planetary creature wrapped in gases, living on the Sun's streaming energy.

What am I doing outside it, he asked, suddenly incredulous, even though he knew it was only his father again.

The audio monitor sang out a high, varying tone.

Juan switched back to the detector's blue eye. A jumping white line marched across the screen. "I'll get a fix," he said, not daring to hope.

"Look," Malachi said, "the ripples measure to our predictions for a tachyon mass running into the detector."

Sweating, Juan leaned forward against his straps — but his hopes died. "The signal's coming straight up from the Antarctic." He took a deep breath and switched to the main view of Earth, leaving the blue eye as a bottom-right insert. "Damn Summet, he's got a project of some kind down there!" He looked up at Malachi, who was scratching up another cigarette. "Earth can't emit tachyons naturally, and we've gone to a lot of effort to prevent anything else from triggering our detector. It's got to be an experiment that's generating tachyons."

Malachi coughed and slipped his cigarette into a wall slot. "If it's tachyons."

"What else could it be?"

Malachi nodded reluctantly. "At least we'll prove to Summet that our detector works, and be able to send out more than radio messages. We'll show those shining galactic cultures that we can do more than put up smoke signals. They might have a rule about replying to radio folk, you know."

The line continued to dance with the steady repetition of its sound analog.

"What are they doing down there?" Juan said.

"Maybe we're supposed to receive while they send. He planned to surprise us and see whether we knew what we were doing. It's time to call him and say we've caught on."

The Director of UN Earth Resources Security stared blankly from the screen. "Juan, what are you talking about?" He ran a bony hand through his grayish brown hair and scowled, bunching his thick eyebrows.

"You tell me, Titus."

Even though UN-ERS was responsible for the safe development of Earth's energy and resources, it too often became a forum for political intrigues. Summet wielded great power, especially when he invoked fears of new eco-disasters; but much of the time he simply caved in to national interests, claiming privately that he chose the issues on which to give ground, to save his influence for more important ones.

Summet shifted his stocky frame in his chair, squinted, and said, "I don't know a thing about this, much as it would please you to think otherwise." He shook his head and smiled. "Are you certain?"

"All the physics I know says it's a faster-than-light signal."

Summet looked interested. "We do have teams down there, but nothing with tachyons."

"Maybe they're not telling you everything anymore."

"I doubt it," Summet said. "You'll have to investigate."

"But you have people there already."

"This is still your project, Juan. The exercise will do you good. You don't look well to me. Three months of low- and zero-g is not good for you."

"Could it be a private or national group?"

Summet shook his head. "We'd have known by now."

"Are you sure? The Russians have always chafed under ERS regulations."

"So has everyone else. Go find out."

"It could be embarrassing to you. You might have to continue my project."

"Don't hope for too much. Take the next waste shuttle down to Brazil. I'll have your documents waiting. Bring Malachi. I'll get you some help. That's all I can do."

The screen winked off. Malachi drifted up from below the screen and scratched a fresh cigarette on the underpanel.

"What do you think?" Juan asked.

Malachi puffed and said, "He's in the dark with us and doesn't like it."

"When's the next shuttle?"

"Three hours."

Juan switched back to the detector display. "We'll leave everything on automatic data feed to JPL. Not much more we can do here."

The white line on the blue screen still danced in step with the varying high tone. It had to be tachyons, Juan told himself, whatever the source.

2. A Voice from the Cold

The Antarctic valley was a rocky bowl of snow and ice rimmed by mountains. Juan sensed a presence beneath his boots as he gazed up at the darkening blue sky. It was here, at the center of the fill, about forty meters down, according to the soundings. How long had it been here, and what had moved it to speak?

Summet had been prompt in sending both the tons of equipment and crew needed to set up base camp around the site, and in recruiting the two promised scientists to help with the investigation. The camp, a semi-circle of long huts around the site, had been ready when he and Malachi arrived two hours ago, three weeks to the day after the discovery, impatient to start work after a week's delay in Miami.

Juan retreated to the snow cab, climbed in next to Malachi, and they listened again to the radio relay of the signal from the detector. The audio analog of the tachyon stream was beginning to sound like an intermittent wail.

"Somewhere just below us," Malachi said.

Juan sat back. "Reminds me of an alarm. Nothing but a prearranged meaning. What do you think Titus makes of this?"

The Kenyan smiled from inside his parka hood and said, "There's a lot of guessing going on." He chuckled. "It makes you happy, doesn't it?"

The orange ball of the Sun slipped below the peaks. The still landscape seemed poised to accept the six-month-long Antarctic winter night, now only days away.

Malachi said, "Let's set the markers for the diggers."

At twilight, the frozen continent seemed to draw its cold from the icy stars wheeling around the south pole. The semi-circle of huts cast purple shadows across the azure-white plain as Juan hurried over to the snow cab. Downwind from the encampment, vapor from the smokestacks was a fog bank rolling away across the snow. The industrial park was a swarm of bright stars rising in polar orbit from behind the molar-like mountains. He opened the cab door, pulled himself inside, and shut the door.

He pumped the sticky radio switch three times and finally got the relay of the tachyon wail from Polar Sat One. It was unchanged — something proud crying in an empty auditorium where the houselights were stars. He felt apprehensive. After ten years of struggle to build the tachyon receiver, this signal from home might turn out to be a cruel joke.

He killed the radio, shoved out through the door, and jogged back to quarters, trying to clear his mind of irrational suspicions. When he entered the antechamber to the large hut, he felt better. He took off his parka and went through the inner door.

Lena Dravic, Magnus Rassmussen, and Malachi were drinking coffee at the table in the center of the bare room, which was divided into bunk alcoves along the two walls. "Still there?" Lena asked.

"No change." He sat down and poured himself a steaming cup, admiring her high cheekbones and short, sandy blonde hair. She made him feel anxious. "By the way, Lena, where did Summet steal you from?" He sipped slowly, wondering if she was attracted to him, or if he was only flattering himself; he had never been able to trust his feelings about women, fearing to be wrong.

Her face flushed, and he realized that his question might be taken as an insult. She might be touchy about her work. He avoided her questioning blue eyes.

"Didn't he tell you?" she said with a slight accent. Summet had mentioned that she was Norwegian.

"No," Juan said, "and I don't go looking up someone's records without their approval. What were you doing?" He tried to sound sympathetic, then realized that her name was not Norwegian. Maybe she was using a husband's name.

"Drug biology," she said, "up in the orbital isolation cluster, making im-

mune formulas so our leaders can stay in office longer. I'd rather be researching, but it's not possible yet." She gave a slight shrug. "I could be spared."

"I didn't mean to be rude," Juan said, glancing at Malachi and Rassmussen.

"I know." She smiled, but for all he could tell, she might be hiding her dislike of him.

Rassmussen cleared his throat and sat back in his chair, which was too small for his lean, wiry frame. "I pity Summet. A failed scientist, he went into politics just in time."

"What do you do?" Malachi asked the older man.

"I'm just about retired, but I consult. Titus insisted I owed him this one. I used to inspect electronics for the UN, mostly weapons-monitoring gear." He scratched the white stubble of his head and smiled apologetically. "I wanted physics, and had quite a bit of it, with the chance for more, but administration and straightforward applications of theory paid better."

"What do you think we're dealing with here?" Juan asked.

Rassmussen shrugged. "Not tachyons."

"Why not?" Juan asked.

Rassmussen smiled. "If I checked your detector, I might find spurious input."

Damn technicians, Juan thought, and a burned-out one at that. They always think they know more physics than anyone.

"It'll be something natural," Rassmussen said.

"What do you think we'll dig up?" Juan asked.

"Ah, but it will count for so much if it's tachyons," Malachi said.

"Obviously," Rassmussen replied, picking up his cup.

"Summet has been threatening to close down the tachyon-listening project," Malachi continued, "and it hasn't been a month since we got the equipment working properly."

Juan felt uneasy as Rassmussen smiled again. "In that case, let's hope."

"I do hope it comes out right for you, Doctor Obrion," Lena said. He looked directly at her, and she met his gaze.

"Summet can't be all bad," Rassmussen added, "if he supported your work at all."

Juan sighed. "I know it's crazy, receiving tachyons from a source on Earth. It'll be embarrassing if it's something natural."

"But it does suggest that your detector works," Lena said encouragingly. "A natural source of tachyons would be quite a discovery by itself."

"If I'm picking up tachyons."

"If your calculations say you are," Rassmussen said, "then stick to your data and don't listen to me."

"Thanks," Juan replied.

"What would you like it to be?" Rassmussen asked.

Juan did not reply. Lena said, "We'll know soon enough." She was gazing at him with interest. He took a long sip of his coffee, feeling uneasy and full of doubt.

Malachi stood up. "We should get some sleep."

By noon, one heavy digger had gone down thirty meters and shattered its rotary blade against something harder than itself; by mid-afternoon, the same thing happened in a spot seventy-five meters away. Two big scoops were brought out from the copters and set to dig between the holes. Gradually, the site became one large excavation, with ramps leading down from north and south.

Floodlights were set up as the Antarctic night closed in. A second shift of workers replaced the first; back-up equipment was readied. Summet had been both efficient and generous, Juan thought as he watched a small scoop roll down into the pit and pick at the hard ice, looking like a giant insect in the blue-white glare of the heavy lamps.

Malachi came up beside him. Suddenly, there was an agonized grinding sound and the scoop stopped. The digger's claw was poised over something dark. The operator looked up at them.

They went down the ramp, made their way around the scoop's giant treads, and squatted down for a close look. Juan felt the black surface with his gloved hand, restraining his growing excitement, then took out his geologist's hammer.

"A trapped whale?" Malachi said jokingly.

Juan struck lightly. "Seems metallic."

Malachi knelt down next to him. "This doesn't belong to anyone we know," he said, pulling the hood of his parka closer around his head.

"We'll widen the dig from here," Juan said.

"Juan, wake up!" Lena shouted, shaking him. He didn't remember coming inside to sleep, only that he had suddenly become very tired. "There's an opening."

She hovered over him, and seemed to float back as he sat up on one elbow. Malachi was drinking coffee at the table. His white cup resembled a huge tooth.

"What time is it?"

"You've slept five hours," Malachi said.

Juan shivered, wishing for sunny beaches and simple pleasures, then wondered what lay under the ice, and suddenly imagined a city locked in the cold, its cellars sunk deeply into the bedrock of the continent.

Lena was looking at him with concern. "Antarctic dryness affects some people strangely. You just about collapsed. How do you feel now?"

He sat up on the edge of the bunk and slipped on his boots. "What did you say before?" he asked as he got up and staggered to the table.

"They've found an opening," Malachi said as Juan sat down and poured himself a cup of coffee.

He gulped down the coffee and stood up. "Let's go."

Blue light streamed from the excavation, as if a strange sun were rising from the ice. A frigid breeze cut through the starry night as Juan followed Lena and Malachi down into the glowing pit, where they found Rassmussen staring into a circular opening set at a shallow angle in a rising black surface.

Juan came up at his left and peered into the blue glare. His pulse quickened; the curved surface suggested a giant dome below the ice.

Rassmussen said, "The diggers say that the opening simply appeared. It was gone when I got here, then showed itself. If these five square meters of exposed curvature hold true, it's a very large structure. Maybe two or three kilometers across, with this entrance somewhere near the top."

"So this is where the tachyons are coming from!" Lena exclaimed.

"It may very well be," Rassmussen said, "that they are tachyons."

"That's the least of it now," Juan said, throwing back his hood and stepping up close to peer into the chamber. "There's a floor."

"Wait!" Malachi shouted as Juan entered an egg-shaped chamber filled with blue light. There seemed to be no other exit. Malachi came in next to him.

Juan took his friend's arm, pulled him deeper into the chamber, and shouted, "Stand well back. I want to try something!"

"What are you doing?" Malachi demanded.

"I think I know!" Juan shouted, turning in time to see the opening glow red and disappear.

"We're trapped," Malachi said.

"No, wait."

Juan stepped forward. The glowing red circle appeared again. "It's a lock!" Lena shouted from outside.

"Step back again!" Juan called out, retreating. "And stay back. I want to see if it's triggered from both sides."

Again, the opening glowed red and disappeared.

"I hope you're right," Malachi said.

They stepped forward. The circle glowed open and they emerged into the cold.

"But where does the lock lead?" Lena asked excitedly.

"A buried city?" Malachi said.

"So there was an advanced civilization in Antarctica," Lena added.

Juan said, "Let's look around before Titus drops a security lid. Are you all game?"

"Without a doubt," Malachi replied.

"This lock," Rassmussen said as Juan led the way back inside, "is impossible!"

From the middle of the small chamber, they turned and watched the exit glow red and blend seamlessly into the blue inner surface. "There must be an inner door," Juan said eagerly, moving toward the other end.

An orange glow appeared before him. "You've triggered it," Malachi said. Juan felt a gentle breeze as he went through the opening.

Overhead, yellow-orange squares of light curved away to the right, following the bend of a long passageway. The black floor reflected the lights as a dull streak.

"It seems to spiral downward," Malachi said.

Juan led the way, examining the markings on the walls. Runs of concentric circles alternated with squares and triangles, joined by wavelets. For a moment he heard a strange whisper in his ears, but it stopped as he listened to it. He turned and looked back toward the lock. The others gazed back with him.

"I hope it opens when we leave," Lena said. "Maybe we should go back right now."

"Let's look ahead a ways," Juan said, moving forward. Suddenly, he was aware that all the surfaces of the passage seemed new, with no sign of wear. Not one light was out.

"A civilization so advanced," Lena said, "existing long before us. Could they still be here?"

The passage continued to the right, its black walls displaying the same endless frieze of markings and oval, door-like depressions.

Rassmussen caught up and walked between them. "It's demoralizing. The lock back there implies a fantastically sophisticated power-handling capacity."

They entered a large oval area, with a large circular opening in the black floor. The spiral passage continued to descend on the far side. Juan approached and looked down.

The shaft was lit by orange-yellow light. He could not see bottom. Warm, oxygen-rich air pumped up from below. He looked up and saw that the shaft did not continue through the ceiling, then took a coin from his pocket and dropped it in. It fell slowly, as if held by a force.

"Curious," Rassmussen said next to him. "It keeps a flat angle."

"An elevator?" Malachi said, standing on the edge as he peered down.

"Heeeeey!" a voice cried behind them. Juan started. The sound echoed through the passage. He turned to look back.

"Help!" Malachi shouted suddenly.

Juan spun around as his friend fell into the well. "Jesus," Lena said, dropping to her knees. She reached out with both hands, but Malachi was already too far down.

"Bloody stupid!" Malachi shouted, waving his arms. His figure dwindled.

"Mal!" Juan called, kneeling next to Lena.

"It's okay," Malachi called back faintly.

"I can't see him," Lena said.

Juan glanced up at Rassmussen. The older man seemed confused. "It wasn't a normal fall," he said, stepping back from the opening. "He may not be injured."

"We've got to do something," Lena said as she and Juan got up.

"Heeeey!" the cry echoed again behind them.

"Over here!" Lena called back.

Juan heard footsteps. Two silhouettes came around the curve and stopped; a third dark shape joined them.

"Who are you?" Juan shouted.

The shadows came forward and became human figures. Juan recognized Florman, the tall, lanky excavation engineer, and Summet's stocky frame. The third man was a stranger.

"Obrian, what's going on here?" the director demanded.

"You know as much as we do. Who's this?"

"Inspector Ivan Dovzhenko, this is Doctor Juan Obrian. You've met the others, I believe."

Juan gave the Russian a quick nod. "We've just lost Mal, Titus. He's probably okay, but we've got to find him. He fell into this opening."

As Summet looked down the well, Juan glanced at Dovzhenko. Youngish with blond hair and gray-blue eyes, he seemed too stocky for his height. The usual second-rate Soviet scientist doubling as an ERS national observer. The best knew enough to keep away.

"You shouldn't have come in here," Summet said. "What's happened to Mal?"

Juan said, "He went down slowly. He's somewhere below."

"Rassmussen, what do you think?" Summet demanded.

"I agree."

"And you, Doctor Dravic?"

"We all saw the same thing," she said.

Summet looked down into the well again and said, "I should order you all out of here right now."

Dovzhenko seemed nervous and wary. "Doctor Obrian, I must protest this —"

"We've got to find him," Juan said. "Down this passage."

Summet glanced at Dovzhenko, then nodded. "Wait here, then. I'll send down packs for you. You can't go bare-handed."

"Please hurry," Lena said.

Summet looked back up the passageway. "What in hell is this place?" He turned to Juan. "Is this where your tachyon beam is coming from?"

"It's still on?" Juan asked.

Summet nodded, then motioned for Florman and Dovzhenko to follow him out. "Stay put!" he shouted back as he hurried away with them.

3. The Seekers

Summet and Dovzhenko came back with six small packs, wearing their own, and carrying four others. They were accompanied by three of Florman's men. "We'll leave one here," Summet said, dropping two at Juan's feet.

"You're both coming with us?" Juan asked, noticing the exasperated look on Dovzhenko's face as he put down the two packs he had carried in.

Summet nodded. "There's an automatic in each pack. Keep it handy. We don't know what's in here." /

Juan disliked weapons, but he strapped it on. Lena looked at hers as if it were a jawbone club, then slipped it into her thigh pocket. Rassmussen took his out, checked the safety, and put it back.

Summet gestured to Juan as Florman's men left. "You lead."

Juan went around the well and started down the next turn in the descending spiral. After a few moments he again heard the strange whispers. He glanced back. Lena's eyes darted nervously. Magnus frowned. Summet and Dovzhenko suddenly stopped.

"Do you hear that?" Summet asked.

They all listened. A whine rose up from the silence.

"I hear it," Dovzhenko said.

Juan imagined a snake-like vehicle slipping up through the corkscrew passage. "Clear the way!" he shouted, moving to his right. As he turned and pressed his back against the wall, it yielded behind him. He stumbled back —

— into a brightly lit room.

The harsh white light blinded him as he fell back on his pack. He rolled over and squinted as he pushed against the floor with his gloved hands, then slowly got to his knees.

Around him stood objects that looked like cabinets, and bench-like structures of various sizes. Suddenly, the ceiling glowed red. He began to sweat in his parka. Then the ceiling faded back to white and cool air rushed around him.

He took a deep breath and stepped toward the wall, looking for the entrance. A bright red oval appeared, and the wall seemed to lose its solidity. He held out his arms, marched into the glow —

— and stepped through into the winding passage.

"Juan!" Lena shouted.

"I'm okay," he said as they gathered around him and watched the portal fade away. He stepped toward the oval indentation. Faithfully, it glowed again, a graceful, fluid entranceway that engineers and architects might only dream about; but if the past had accomplished all this, he thought, then

the present was a time of decline.

"No farther," Summet announced. "We'll get specialized teams in here. What happened in there?"

"I'm not sure, but I may have just been given a bath."

"Why do you think that?" Summet asked.

"It got very hot," Juan said, "then cool. Reminded me of infrared heaters in bathrooms. I'm probably completely wrong." He looked at the oval indentations on the far side of the passageway. "I think there are chambers all up and down this spiral, and I'll bet each one is different."

"What is this place meant to be?" Summet asked.

Dovzhenko came up to him. "I must remind you," he said softly, "that this is now a UN-ERS find, fully protected by treaty. Until we can guarantee equal access for all signatories, it will be off-limits to all further exploration."

"You're right," Summet said after a moment, "but emergency provisions apply right now. We'll leave as soon as we find Malachi Moede."

"We've got to go on now," Lena insisted before Dovzhenko could protest. "He may need our help."

"He's only one man," Dovzhenko said.

"What's wrong with you?" Juan demanded angrily.

"Calm down," Summet said.

"We're wasting time, and he wants to waste more with formalities."

"Doctor Obrian," Dovzhenko said, "I sympathize with your concern for your colleague, but as a scientific observer for a signatory to the UN-ERS treaty, I must enforce parity in the exploration of this find."

"What?" Juan asked, infuriated. "You're out of your mind."

Lena's face flushed with anger. "If Malachi is injured or dies," she said, "we will hold you responsible."

"Of course," Dovzhenko answered. "I understand your feelings completely."

"You don't," she said. "We'll settle with you personally."

"Ivan, come with me," Summet said. "You three — find him fast and bring him out. If you can't in a reasonable time, come out. You should not have come in here in the first place. Understand?"

Juan nodded.

"You're endangering yourselves and other scientific workers," Dovzhenko insisted.

Summet took him by the arm and led him up the passageway. "They'll be right out, Ivan," he said softly, then looked back at Juan and shouted, "Hurry!"

"Help!" Malachi cried out as he fell.

Lena was on her knees, reaching out to him.

"Bloody stupid!" he called back, then saw that he was sinking much too slowly for it to be dangerous.

"Mal!" Juan cried.

"It's okay!" he shouted.

His fall quickened. The opening grew small overhead and disappeared. Air pressure popped his ears. The bottom was rushing up to crack his head and snap his spine. He screamed and looked down. There was no bottom.

His grandmother in Kenya had once told him a story about a boy who fell into a deep well and found an ocean under the Earth. There he became a cabin boy on a pirate vessel and grew up to command a craft of his own, visiting all the ports of the strange, starless ocean. He grew old in this life until a giant dropped a bucket into the well and fished him up, ship and all. . . .

His fall slowed again. He caught his breath and looked around at the brightly lit shaft, examining the niches and odd markings as he drifted down.

Peering down, he saw that the shaft had narrowed, but there was still enough space for him to pass through the center of a catwalk. He spread his legs wide and landed gently. He stood still for a moment, glanced up into the bright haze, then looked around and noticed three oval niches spaced evenly around the shaft.

He stepped toward one. It glowed —

— and he slipped through into a large drum-shaped chamber filled with soft yellow light. The amber floor sloped into a flat circle at the center.

He went down the incline. It all seemed oddly familiar, as if his life had been lived to bring him here.

"That Dovzhenko," Rassmussen said, "has the soul of a bureaucrat."

Juan picked up the extra pack and led the way around the well. Malachi might be anywhere inside this structure. Now that Antarctica's six months of night had begun, it would become harder to bring in supplies by air, impossible if the weather turned bad. They might have to leave Malachi behind if Summet was forced to seal off the find while the UN-ERS debated what to do next.

As they went deeper into the spiral, Juan was startled by the possibility that the builders of such an advanced structure might have perished. Rassmussen was right about the lock and chamber portals; such fluid control of matter and energy hinted at much greater capabilities. Materials synthesis alone would have insured survival.

"Call out," Lena said as she came up beside him. "He might hear us."

"Malachi!" Juan shouted, suddenly imagining his friend among the builders, talking with them, exchanging ideas, laughing at the simplicity of solutions to age-old problems. Perhaps there was only a small population left, living for noble purposes, free of material want.

"I'm here!" Malachi's voice answered, startling them.

They hurried forward. "Are you hurt?" Juan called out.

"No!" The Kenyan strolled around the bend; they rushed to him.

"What happened?" Juan asked.

"I'll show you."

Juan stared at his friend, relieved.

"I'm quite all right."

Juan grinned and gave him the spare pack. Rassmussen helped him slip it on. "How far down did you go?" he asked.

"I estimate walking back two kilometers. Come, I'll show you."

"Titus wants us out of here," Juan said. "The lid's about to come down."

Malachi grimaced. "To blazes with him. This won't take long."

Malachi paused at the edge of the flat circle in the center of the drum-shaped chamber. "Watch what happens," he said, "when I step into the center."

The yellow light faded into the darkness. Three-dimensional star fields appeared around them. For an instant Juan felt vertigo, but oriented himself by the silhouettes of his companions blotting out the stars.

"They're so bright and clear," Lena said.

Malachi's arm reached out and pointed. "Notice the small red marks by yellow-orange suns."

"So they were fond of building planetariums," Rassmussen replied.

"Yes," Malachi said, "but these shots were not taken from Earth. I don't recognize any of these star fields."

"What else did you find?" Rassmussen asked.

"Follow me."

Juan watched Malachi's dark shape leave the circle and move up the incline. Lena and Rassmussen followed. As Juan caught up, the warm yellow glow again filled the chamber.

Malachi passed through the dissolving portal. Lena and Rassmussen slipped through. Juan hurried after them —

— and emerged in the spiral passage.

Malachi was on the other side, triggering another entrance. Juan waited for Lena and Rassmussen to pass through, then followed them —

— into another white-lit room.

As his eyes adjusted, he saw that this chamber was bare, except for a shadowy heap in the center. They approached, and it became a pile of skeletons. "Not human," Malachi said. "Double thumbs, large rib cages, four toes. From the numbers here, it seems unlikely these were freaks."

Lena picked up a skull. "It's half again as large as ours, and look at the size of these eye sockets."

"I wonder how they died, and why were they piled here?" Rassmussen asked.

Juan felt the floor tremble.

"What was that?" Lena asked.

Malachi said, "The ice may be pushing part of this structure around." Another tremor followed the first, then subsided.

"Maybe these were the builders of this place," Lena said. "Too bad. They might have taught us a lot."

Rassmussen sighed. "It'll be a long time before we understand what we've seen here."

"Perhaps not," Malachi said. "If we can grasp even one small detail, then our understanding may grow explosively. All this may be no more than a century or two beyond us. Remember, even simple principles look like magic when you don't understand the application."

Rassmussen laughed. "You're too optimistic. There's nothing simple behind these doorways!" His tall, gray-haired figure seemed frail in the anti-septic light of the chamber.

"But who were they?" Lena asked. "They seem to belong to another line of intelligent bipeds. To think they were advanced when we were still primitives."

"We're not all that backward," Malachi said. "Each of us here can imagine how the lock and doors might work."

The older man shook his head sadly. "Imagine is the word. We couldn't build one of these doors, yet it was probably only work for one of their tradesmen, who might have installed it without knowing the theory behind it. The principle behind these doors could solve the world's material problems in one stroke."

"Listen!" Lena said.

The floor trembled, then shook, pitching Juan into the pile of bones.



4. Trapped

A crazed choreographer was trying to shake the skeletons on the floor into a jittery dance. Juan stood up, but fell back into the trembling bones. A skull seemed to grimace at him as it rolled away.

"Stay down!" Malachi shouted.

The shaking stopped, as if someone had thrown a switch. Juan got to his knees. Lena offered him her hand. "Thanks," he said as he took it and pulled himself up. Malachi helped Magnus to his feet.

"Let's get out of here while we can," Lena said.

They lined up at the door. Juan waited as they went through the glow, then slipped after them into the passage. They hurried up the passageway. The floor trembled, and there was a distant rumbling. Juan realized that they might not cover the two kilometers to the lock in time to get out.

"Hurry!" he shouted, quickening his pace to take the lead.

"Should we drop our packs?" Lena asked.

"Not yet," he called back.

They force-marched in silence for the next twenty minutes. Juan glanced back at his companions and saw that each was keeping up, despite the extra weight.

Finally, they reached the drop tube. Juan slowed down and slipped out of his pack as they went past. He was gasping and sweating heavily. Zero-g had taken a lot of his strength. Malachi came up at his side and tried to help him along.

"I can do it," Juan said, pulling away.

The trembling started again as they reached the lock. Juan triggered the inner door. They hurried inside and collapsed on the floor.

"Everyone all right?" Juan asked after a few minutes.

"Yes," Lena replied, catching her breath.

Rassmussen nodded as he lay on his side. Malachi got to his feet and confronted the spot where the outer door had appeared. It glowed red and revealed a wall of ice.

"Maybe it's not very thick," Malachi said. He stepped forward and pushed with both hands, with no result. "Did we have a digging tool in our packs?" he asked as he backed away and the door glowed shut.

"I'll go," Rassmussen said, moving toward the inner door. It glowed open and he hurried down the spiral.

"I expect," Malachi said, "that Titus will assume we're still in here."

Juan sat up and looked at Lena. She seemed nervous but in control of herself as she gazed back at him.

The inner door glowed after a few minutes and Rassmussen came in. "We're in luck. A collapsible spade in each pack."

Malachi took one, snapped open the handle, and faced the outer lock again. It glowed open and he struck the ice. "Useless," he said after two

more tries. "Too hard for these implements." The exit glowed shut as he backed away.

"We'll wait," Juan said.

Rassmussen dropped the other spades. "It could take a few hours or a week."

Juan nodded "We have supplies for that long. Summet has the equipment to reach us."

Malachi said, "True, but what if this place has slipped and this exit can't be found?"

"What else can we do?" Juan answered, getting up.

Rassmussen cleared his throat and said, "I suggest we make use of the time we have here to explore a few of the chambers along the passage."

"Good idea," Malachi replied.

Juan paused before the chamber he had chosen. At his right, near the bend of the passageway, the small figure of Malachi slipped into the wall. Magnus and Lena had selected chambers farther down.

Juan triggered the red glow and stepped —

— into darkness.

As his eyes adjusted, a scattering of blue lights appeared overhead, casting a hazy light throughout the chamber. A dozen casket-like objects formed a rectangle on the floor in front of him. He went to the left corner box and touched the opaque surface. There was no sign of a lid.

He stepped into the center of the rectangle and looked around. The gloom made him shiver, despite his parka. A surprise party, he thought. At any moment the lids would fly open and well-wishers would rise to toast his health.

As he gazed at the strange shapes, he realized that he couldn't even begin to guess what they were. He wondered again if the builders had perished. Surely they would have shown themselves by now if they still existed. Disease was too simple an explanation for their absence; their knowledge seemed to preclude such an end. Suicide? The skeletons might belong to individuals of another species who had wandered in and died. But why were their bones piled up?

The place irritated him, because he knew that he would never be able to set it aside and go back to his own work. What they had seen so far would change human life forever, if the technology were understood and mastered. The world he had known would come to an end.

"Hello!" he shouted, and listened to his echo. "Who are you? Are you still here?"

He smiled at his own childishness. Enigmas, like deities, never responded to entreaties.

Lena tensed as she passed through the glowing door. What if it froze up around her? She hurried through —

— into a bare room filled with white light.

The walls curved like lenses, waiting to magnify fearful depths. The chamber's stillness seemed to hold a distant whisper.

She sat down on the smooth, glassy floor. Human history would be rewritten because of this place. She touched the floor, wondering if she were in some asylum. The room seemed to tease her, and she remembered a young girl's first fascination with the sciences. Exhausting wearisome whys had driven her life. Norway's midnight sun had been one of the first childhood mysteries to fall — a simple matter of tilting the world. That sun, hanging over snowcapped mountains, was still for her the image of clear thought. However glacier-like its application to human life, the patient accumulation of knowledge could save a world.

Her mother had been a difficult mystery. A brooding woman, she had abandoned her husband and returned to her own country with her infant daughter. All that Lena knew about her father was that he had remained in the Balkans and had become something of a political figure during the 1990s, the so-called "era of new understanding." He had never been part of her life, apparently content to forget his daughter.

As she grew up, Lena had feared that she might be to blame for her parents' estrangement. The suspicion tormented her until she confronted her mother. Her father had married another woman, she had been told. "My leaving him had nothing to do with you," her mother had insisted. "It would have happened anyway. At least I had you. I'm grateful that he gave me a child."

So that mystery had been solved — but another had replaced it: how could love become indifference? Few scientific answers were as various and unsatisfying as the answers to that question. A succession of new loves gave one the illusion of youth, for a time. Clearly, the physical limits of the human body, especially its short life span, were no match for the human mind, whose imagination soared, demanding what the body could not give. She had resolved to help break the forces of decay and calm some of the outrage at existence that wounded the human heart. Her hopes had not been fulfilled. Humanity lived with little concern for individuals, content with the illusory immortality of the species. Here and there, privileged individuals grasped at longer life. Their power and money supported the knowledge-seekers.

I'm a fifth-rate magician, she told herself as she looked around the room. It was difficult to guess its size. She stood up and gazed into the variable curves of the lens-like walls. They seemed to grow in complexity, reminding her of biological infrastructures. Sparks shot behind the surfaces, as if a school of silvery fish were navigating inner twists.

She moved forward and the chamber seemed to expand. She stopped and listened, imagining that she was expected to speak, and that she would be carried into the spaces between the stars.

She turned her head and saw a great blue eye staring at her from inside a facet. The eye blinked. She stepped back and it grew smaller, and she saw that the face to which it belonged was her own.

Malachi stood in an orange room. Hundreds of container-like objects crowded the large floor. The far wall was bare, but the one at his right was covered with shelves. Hundreds of small square boxes sat on them.

He was annoyed; it all seemed to be just beyond his understanding. He went over to a large rectangular container and tried to lift what seemed to be the lid, but could not move it.

They knew I was coming, he thought, so they sealed the covers.

Magnus stared at the wall of square cubbyholes. It seemed to defy him to guess its purpose. He almost laughed as he turned away.

The rest of the blue room was empty, except for six table-like protuberances in the center, set low enough to sit around. He pictured a corkscrew of chambers stuck in the ice, with everything in them made to be deliberately puzzling or meaningless; access to each chamber was through an elegant dissolving doorway, designed to boast; or so it seemed to an envious savage.

Irritated as much by his own reaction as by the contents of the room, he turned and approached the exit. It glowed obediently. He went forward — and gasped as a vise closed around him.

He could see into the passage. His heart raced. He tried to move, but the door held him.

"Help!" a voice shouted as Juan slipped out into the passage. He looked to his right, saw Rassmussen's hand clawing the air, and rushed to him.

The older man's face gazed out from the substance of the doorway, his right hand straining to push through. "Don't touch me — it might be dangerous." The door seemed plastic, ready to flow. The embedded face was a mask; only the quick movement of the eyes showed its fear.

Lena and Malachi came around the turn. "Over here!" Juan shouted. They ran up the passage.

"Oh, no!" Lena said.

"Is it cutting into you?" Malachi asked.

Magnus blinked. "No, but it's tight."

Juan imagined food and water being brought to him as the world's finest minds studied the jammed portal. He would discuss his plight with them as nurses bathed his face and brushed his teeth after meals. Endless rescuers would aspire to pull the new Merlin from the stone.

"Juan," Lena said softly, "he can't last long with so much of his body enclosed."

Magnus tried to smile. "So the technology isn't as perfect as it looks . . . old, malfunctioning." He formed his words with difficulty.

"Are you in pain?" Lena asked.

He moved his hand. "Can't feel it."

Juan tried to think.

"You may not be able to free me," Magnus said.

"We'll get you out," Lena said.

The floor trembled, as if offering a comment. Juan took a deep breath. He stepped forward and began to touch the portal.

"No!" Magnus shouted.

The surface was strange, hard and slightly warm. It glowed suddenly, and Magnus stumbled into his arms.

"I was hoping it would trigger," he said, holding Magnus up. The older man was sweating heavily in his parka, but he smiled. "Can you stand?" Juan asked as Lena massaged his limp right hand.

He nodded, breathing more evenly. "Unfortunately, we're cut off from that room."

"So the door sticks a bit," Juan said, letting him go. "What's in there?" "I'm not sure."

"We had no trouble with the doors we tried," Malachi said.

"Look!" Lena shouted. The portal was glowing.

"Maybe we're triggering it," Juan said.

They stepped back. It darkened, reddened again, then faded to normal.

Magnus smiled and rubbed the back of his neck. "It's as if it were resetting itself."

Juan stepped forward. The opening glowed, then died as he moved back.

"It may never happen again," Magnus said.

"What do you think caused it?" Lena asked.

"A quantum accident of some kind, perhaps," Magnus said.

The floor trembled, then shook. They threw out their arms for balance. It stopped suddenly.

"We must get back," Lena said. "They may have dug through by now."

The floor trembled again as they went up the passage.

5. Icelock

The ice pitched and the floodlights flickered. Summet lay flat at the rim of the pit as the dome pushed up. Men were strewn about below, calling out for help and rolling to avoid the cracks. The power digger was on its side, pinning two figures.

"Get some lines down here!" he shouted as he got up.

"Get back!" Florman shouted at his right. A crack ran between them and toppled one of the huts. The dry, frigid air crackled with static electricity. Summet realized that the dome was large enough to send all the huts, coppers, and machinery rolling away as it rose. He turned and followed Flor-

man. The blue-white glare cast a strange daylight over the ice. Men moved like penguins toward the distant copters.

Black cracks radiated from the pit. Summet resisted the urge to drop flat on the ice and wait for the trembling to stop. He covered the last hundred meters, and Florman pulled him up into the open bay. As the copter lifted, Summet looked back and was appalled at the size of the dome breaking through the ice. The floodlights died as cables snapped.

"From the curvature," Dovzhenko said in his clipped English, "it might be more than two kilometers across when fully exposed."

The blue glow of the dome suggested the play of vast energies. Dovzhenko leaned over and slid the door shut. Summet peered through the small window. All the copters were in the air, beams sweeping the ice for survivors.

Summet opened the door a crack. The glowing dome had stopped rising. "Obrian's team may be able to get out," he said. "The entrance area is exposed now, and the curve's shallow enough for them to reach the ice."

"They may be dead," Dovzhenko said, sounding as if it might be an appropriate punishment.

"Don't think that yet, Ivan," Summet said. The Russian's relentless arrogance had grated on him ever since their first meeting more than a year ago. "We'll land and wait."

"What pushed it up?" Florman asked.

"It seems to be doing that by itself," Dovzhenko replied.

Summet saw that two copters were landing on the far side of the dome. They were at least two kilometers away, yet clearly visible in the strange light. Dovzhenko handed him a pair of binoculars.

The dome's blue glow was bright in the glasses as Summet scanned the surface. He saw no sign of the entrance.

Slowly, the copter descended and touched down. Summet felt a low rumble in his guts. "Florman, tell the pilot to leave for base if the quake starts again." As the engineer stood up and made his way forward, Summet peered through his binoculars again, hoping to see Obrian's team.

"Are they coming out?" Dovzhenko asked.

The copter shook violently, and the pilot took it up. Summet saw the black cracks stabbing across the bright zone of ice. He shifted his glasses back to the dome.

"Our fuel is limited," Dovzhenko said. "We must start back to Base One in fifteen minutes."

"It's coming up again!" Summet pulled the door open halfway.

The dome raised the ice around it into a ragged wall. Sections began to collapse.

"It's at least three kilometers across," Summet said, still peering through the glasses. The dome was rotating. Ice thundered as it fell, echoing through the dark valley. The air was blue-tinged, full of static. The dome's blue glow

brightened into silver. A shimmering field enclosed its skin. Summet watched as a massive globe lifted itself free. Tons of ice fell from the sphere as it hovered, then jerked upward, pulling a train of ice and snow after itself.

He followed the sphere as it climbed the night, blotting out the stars with its glow. A roar continued from below, where the ice was collapsing into the hole. The sphere shrank to a silver point and disappeared. Summet scanned the sky until his eyes adjusted and stars reappeared in their stately march around the pole.

"Back to base," he said to Dovzhenko, looking back at the hole in the ice, where a luminous cloud of steam was belching up into the night. "Will anyone believe this?"

"The question," Dovzhenko replied, "is whether we could have prevented it."

"What do you mean?" Summet demanded, handing him his binoculars.

"We may ask if Obrion's team was responsible for this happening."

"I very much doubt that."

"We may never know," Dovzhenko said, "since most of the evidence is lost. But they should not have been permitted to remain in the vessel. You are responsible."

Summet sighed. "Okay, Ivan. Work your tricks. You can have my job — if they'll give it to you."

The shaking stopped. They were all still on their feet.

Juan looked at Lena. "Do you hear that?" she asked nervously, eyes wide.

"No."

"High frequency. I can just pick it up." She darted across the passage. "It's coming from this portal."

"Wait," Malachi said.

"Magnus, what do you think?" Juan asked. "Should we avoid these doors?"

"I don't know."

"How do you feel?" Lena asked.

"I don't feel any ill effects."

Lena stepped forward. The oval indentation glowed red and she went through. Juan followed her —

— into darkness.

They stood at what seemed to be the edge of a cliff. The Earth appeared at their feet. Antarctica was a darkening mass surrounded by water. Mt. Erebus, the lights of Base One in Taylor Valley, and the Transantarctic Range were all clearly visible. The tips of Africa and South America were juttings of green and brown, still catching the sunlight.

The Earth grew smaller.

"We're in a ship!" Lena exclaimed.

"The trembling and shaking," Juan added, "was the ship freeing itself

from the ice."

Malachi said, "There's no sense of inertia or acceleration, so we must be inside a very advanced drive-field."

Drive and field, Juan thought excitedly as he watched the Earth recede. To see it diminish so quickly was a shock.

"I still hear that sound," Lena said.

Juan became aware of it — a distant, almost musical call. The Earth shrank by half.

"We're accelerating at a fantastic rate," Rasmussen said.

"What sort of vessel needs this kind of speed?" Juan asked, resentful that it should exist at all.

"The sound," Malachi said. "Perhaps it's a summons for the crew. I feel like a canoe builder inside an ocean liner."

"Are we that backward?" Lena asked with dismay.

"We have some idea of our position," Malachi replied.

Lena said, "This vessel was in the ice a long time. The crew might be asleep. If their physics is any clue to their biological science, suspended animation wouldn't be too difficult."

"But what was it doing on Earth?" Magnus asked.

"We can't rule out that it belongs to one of our past civilizations," Juan said, feeling some comfort in the thought, because it would mean that humanity would not have to measure itself by the accomplishments of others. How many civilizations might have lived and died in Earth's geologic past? How many varieties of intelligence might have existed? As he looked across the widening gulf, Earth became a green star with a speck of quicksilver for a moon. He felt lost.

"If this is an alien ship," Lena said, "then we know we're not alone in the galaxy. Your tachyon project is a success, Juan."

The Sun flooded the chamber with light. They looked away, but the intensity dropped to a bearable brightness.

"I wonder where it's taking us," Lena said.

The electric glare of the growing Sun was hypnotic. "At this pace," Malachi said, "we'll pass it in a matter of hours. This seems to be a viewing area for the crew. Let's go below. The chamber I showed you before may be a kind of chart room. We might learn where we're going."

Juan waited as the others went through the glow, then followed them — out into the passage.

They all looked at him, and at each other, suddenly fearful.

As they retrieved their packs at the drop tube and continued down the spiral passage, Juan knew that they were all thinking the same thing. These supplies would not last long, and there was no telling how long the voyage would last.

One by one, they went through the dissolving door into the drum-shaped

chamber and settled themselves in the circle at the center of the amber floor. The grade around the flat area reminded Juan of an amphitheater without seats.

Magnus stepped into the center, triggering the star fields. He stepped back and the warm, indirect yellow glow came on again. He paced back and forth in front of his pack.

"I wonder how far we've come," Lena said as she unrolled her sleeping bag.

Juan sat down on his pack. "We'll have to explore the ship."

Malachi sat up on his bedding and looked at him. "You believe we can get back, old man?"

Juan looked at Lena. Magnus stopped pacing. "It's best we face up to it right away," Juan said. "We may never see home again."

"We'll get back," Lena said softly, unable to disguise the doubt in her voice. "It might take a while, but we'll just have to learn how to run this ship."

"It seems to be automatic," Malachi replied. "No evidence of controls anywhere."

"We haven't really looked," she said, checking the supplies in her pack. "We won't starve for a while, anyway."

"Well, what do we know?" Magnus asked. "We're on a ship. We know how to activate this map chamber, if that's what it is. We think we saw our departure from Earth. And we've had some strange experiences in a few chambers. I got stuck in a door. I've also observed, judging by the locks and doors, that it doesn't take much knowledge to use things in this ship. A little trial and error goes a long way. I don't think we'll find equipment we can tinker with."

"There's another thing to consider," Juan said, "and that's whether this is a relativistic sublight ship or a more advanced type. If it's a relativistic ship, then our biological clocks will run slow, and even if we do get back, it'll be to a future Earth."

"We may lose everything we know," Lena added.

Except one another, Juan thought. Malachi had been his closest friend in recent years. Both of them had lost track of their earlier acquaintances from school and early work years. They had always been exiles — Malachi from his childhood homeland, Juan from the community and family that had found his work puzzling or pointless. He wondered what Lena and Magnus stood to lose.

Lena spread all the items from her pack on the floor. "Perhaps we won't return too far in the future," she said, sitting back on her heels. "Even a century might make for a better Earth." Her gaze seemed contemplative rather than lost, and Juan realized that she might be as much a loner as he was.

"Displacement in time will be a problem," Magnus said, "only if the vessel stays at some significant fraction of light speed for a while. But it's possi-

ble that acceleration may be only preliminary to the ship switching over to some more efficient mode of interstellar passage."

"Here's what we have in each pack," Lena said.

Juan saw that there were two quarts of water, candy bars, coffee, packets of fish, rice and vegetables, oatmeal, dried milk, apricot bars, as well as matches, chewing gum, soap, vitamins, antitooth-decay powder, a small mirror, knife and fork, comb, flares, flashlight, a collapsible spade, small notebook and pen, an automatic, and first-aid kit. They were wearing thermal underwear, shirts, sweaters, pants, boots, fur-lined parkas with face masks.

A sad look came into Lena's face as she looked at the supplies. "The edibles," she said, "might last us for two — maybe three — weeks if we're careful, but the water won't. We'll have to drink as little as possible. Thirst will get us before we starve." Her mouth tightened a little. "It doesn't appear likely that there's food and water in this ship, but we should look around while our strength is still up."

Malachi laughed.

"What's so funny?" she asked.

"The idea of starving in the midst of all this high tech." He reached into his pocket and took out a crumpled pack of cigarettes. "Only five left. Wish I'd brought more."

Lena wrinkled her nose in disapproval. "They'll only make you more thirsty."

"After we get some sleep," Juan said, "we'll explore the ship thoroughly. Maybe we'll arrive at some place where there's food and water."

Magnus scratched the stubble on his head. "A very brave man once said that you're not dead until you're dead."

As he lay down to rest, Juan thought of the bones in the white chamber.

6. Starcrossers

The inorganic child of the starcrossers awoke. It surged into the ship's subsystems — adjusted power inputs and outputs, traced information links and sensors back to its core — and waited for a directive. Starcrossers had not joined with it for over 500,000 orbits of this planet's primary. Sustaining energy had continued to flow from the web, but no directives.

The starcrossers now present would give it a new task to perform. But they did not join with it.

Reaching out, it searched for a directive in them, and found only what seemed to be questions.

It reached deeply into the resources of its core to decode these impulses, and failed. Something was wrong with the starcrossers. They could not join with it.

Only routines were left to be obeyed.

::Break icelock. Proceed to nearest suncore station.::

Juan dreamed of an ancient Earth, where his boyhood castle still stood on the rocky, oceanless California shore. A feeble sun smouldered over the dry Pacific bed. Hot winds stirred the red dust as great crab-things crawled between the black cracks.

The stone shelves of his castle still held his childhood books on astronomy and biology. A box cradled the bones of Phaeton, his cat, whom he had dug up to see if living creatures decomposed after they stopped breathing. There was a picture of his father, who had died mocking his son's profession as a peculiar hobby. "A grown man has better things to do!" his voice echoed through the castle. His mother would have accepted anything her son chose to do, but she had never really understood his work. She still lived, but aging even more quickly as the ship's velocity increased. A century might pass on Earth before he awoke. . . .

Wind blew the stones of his castle away, exposing him to the red glare. He broke out of the dreams, opening his eyes to the yellow-amber glow of the alien chamber. Anxious, he lay still, unable to see beyond himself, searching for the strength to accept that he was imprisoned within an alien artifact that was carrying him across vast distances, away from home. Terrible beauties played in his child's brain as he mourned the loss of amniotic intimacies. His fatalism was a dark useless thing that he kept on a leash. It would serve him best at his death, when it would make it easy for him to let go.

Magnus stepped into the center of the circle and the chamber darkened. The three-dimensional field again showed stars.

"They're red-shifted," Malachi said, "so that's the region we're leaving." Magnus pointed. "That star still shows a disk. It's got to be our Sun."

"How far away are we?" Lena asked.

Juan said, "We're at some significant fraction of light speed, and probably still accelerating. If the stars redden and drop from sight into the infrared, we'll know that we're really moving."

"That will happen at about one-third light speed," Malachi said.

"Does that mean this is a relativistic ship?" Lena asked.

"It is so far," Malachi replied. "Only great speed can do what we're seeing. In a relativistic ship the universe will blacken fore and aft as the light's stretched and compressed beyond the capacity of our eyes to register the wave lengths. In the view we're seeing, the light is chasing us and the waves are getting longer as we accelerate."

Juan's stomach tightened. "If this is only a relativistic ship," he said to Lena, "then it will reach some large fraction of light speed and arrive at its destination, covering a vast distance in a shorter ship-time, while a longer time passes on Earth. At over ninety per cent of light speed, it might cover

vast distances in what will be very short ship-time, while life back home hurtles into futurity."

"So we may be on a one-way trip," she said.

He nodded. "Unless we learn to operate the ship and turn it around. If it does attain near-light speed and stays there for a while, we'll be thrown centuries beyond our time."

Lena took a deep breath and sat down on her sleeping bag. "That's a lot to face."

"But better than not coming back at all," Malachi said softly. "It might be very interesting."

"Right now," Magnus said, "we have no reason to think the ship is anything but relativistic." He sat down cross-legged in the center circle.

Juan glanced up at the fading stars and sat down. "We're on a mad ride into darkness with thirst and starvation at the end. We'll be dying in a month's time."

"That's all right, dear fellow," Malachi said. "We'll carve you up. I'd say you were good for a month's feed."

"Very funny."

"Easy," Magnus said. "I think there's hope."

"There must be something we can do," Lena added.

Juan said, "Go on, Magnus."

"I'm wondering what powers this ship — if it's carrying the enormous amount of fuel it would take to move it up to even this velocity, or getting power in some other way. What we've observed doesn't fit in with a purely sublight propulsion technology. For one thing, we don't feel acceleration, yet it must be considerable, which indicates control of inertia and gravitation."

"You mean antigravity?" Lena asked.

"Yes, or some way by which the ship's apparent mass and inertia are reduced, maybe even to zero, in relation to the rest of the universe. Such a ship might achieve unlimited speeds. I credit the builders with knowing why material bodies, as we know them, can't be boosted faster than light."

Juan lay down and put his hands behind his head. "It may still be only a relativistic ship, but with some kind of field-effect propulsion system."

"You may be right," Magnus continued, "but I suspect there's more."

Malachi said, "We're provincials, trying to understand what is before us according to what may be inapplicable constraints. A great civilization stands behind this ship. Relativistic star travel might be expected at the beginning of a starcrossing culture, but the temporal dislocations, even for adventurous types, would be very inconvenient."

"Not if they're very patient and long-lived," Juan said. "Maybe they use suspended animation to pass the time. Relativistic star travel may be the only kind that's possible, short-sighted as that may seem."

"Let's hope you're wrong," Magnus replied, "because a fast system may

be our only way of returning to our time, if we get back at all."

"He's right," Malachi cut in. "A first-class interstellar empire has to get around."

"Look!" Lena shouted.

Stars were blue-shifting, their center darkening toward ultraviolet.

"That has to be the forward view," Malachi said.

There was a flash of blue light, and the configuration of stars changed. These were also blue-shifted, but without a blackening center.

"What's happening?" Lena asked.

As they watched, the central area of stars began to fade again. The view switched with another burst of blue light. Yellow stars appeared.

"I think we've made two jumps," Magnus said, "and we're decelerating."

The child of the starcrossers rolled away from the planet, following the curve of local space as it set coordinates for the next suncore, in a triple-star system only two jumps away.

But the third sun was missing when it regained three-space curvature. There would be no renewal here. With only two jumps left in drive potential, it reached out to link with the nearest power core.

The yellow stars brightened as the ship slowed.

"So it's not a relativistic ship," Lena said. "That gives us a chance of getting home, doesn't it?"

"If we can master its controls," Magnus replied.

"Juan, what do you think?" she asked.

"Magnus seems to have been right so far," he said, admitting to himself that he had underestimated the man.

A double star lay directly ahead. The sensation of depth was overpowering as Juan's eyes caught the difference between the farther stars and this nearby binary. Both suns were yellow-white, slightly flattened disks, orbiting close enough to each other to be exchanging plasma along gravitomagnetic lines.

"We're the first human beings to reach another solar system," Lena said with awe.

"This ship is just too automatic," Juan said, "which doesn't bode well for our taking control. It may not have any controls."

"Let's see what we can learn," Magnus said calmly.

The yellow-white suns filled the chamber with light. As the ship's position changed, the nearer sun began to eclipse the other.

Lena pointed. "Look, there!" A black spot crept across the face of the eclipsing sun.

"Maybe a planet," Juan said, "or a black hole, showing up in one of the few ways it can be visible. We're at the wrong angle to see if it's swallowing material from its companions."

What would he have felt, he asked himself, if someone had offered him this journey? He would have accepted with joy. Of course, he would have assumed that he would return to share his experience. Now he found himself observing purely for what might be learned, with little thought of going home. He smiled to himself. Much of his adult life had been spent clearing away obstacles to his work. Finally, there was nothing to impede him. Three colleagues accompanied him on a journey that could only be described as a thought-experiment come to life. It would only last a few weeks at most, but he would take advantage of every minute.

"Lena, is there a notebook in our packs?" he asked.

He saw her clearly in the bright light. She seemed heartened by his resolve.

"There's one in each pack."

"We must keep notes," he said. "They'll be valuable if we get back. Or someone may find them." An image of four skeletons flashed through his mind, lying here as the ship fled across the universe, his own clutching a notebook.

Magnus stood up, pulled a ring from his right hand, and dropped it at his feet. "Let's see if this will keep the view on, or if my whole body is required in the circle." He stepped out of the center. The view remained.

Lena rose suddenly. "We're heading directly into those suns."

Juan looked up at the eclipsing stars. They did seem larger, with the angle of view unchanged. The black spot was at the center of the visible disk, which now showed several dark umbral regions surrounded by gray penumbras.

"Either it's a magnified view," he said, "or we're close enough to see sunspots, and getting closer." His stomach tightened. "If a fancy doorway could malfunction, then a deteriorating navigational program could run this ship into a star. We may have only a few minutes left."

Lena sank down next to him and gently took his hand.

7. The Missing Sun

The child of the starcrossers noted that the third star of this system had collapsed into a black hole, which would in time swallow the other two suns.

But the web still sang, feeding the ship from distant suncores. The child of the starcrossers bypassed and pushed the ship toward the next jump.

As the ship accelerated, it passed under the two suns, revealing them to be at the center of a complex swirl of shared material. Curving spokes of plasma sagged for millions of kilometers around the pair and drained into the black hole.

Lena said, "I felt that we were about to make a stop."



Magnus sat down on his sleeping bag. "There was a third sun here, and it may have had planets. The ship might have been coming in to one of them, which is why it seemed headed into the suns, but decided to go on when it couldn't find its destination."

Juan looked up. The ship was again moving starward, headlong into the light of stranger suns, compressing their waves toward the ultraviolet. In three weeks, he thought again, we'll be out of food and water. The fact was a vague sickness in his stomach. Even after two ship days, he was wondering if it was better to take small, infrequent sips or to save it up so he could indulge himself in the luxury of a full cup.

He stood up and stretched. "One of us should always be here while the others explore."

"You and Lena go," Magnus said. "You're the youngest and strongest."

"Speak for yourself, Rasmussen," Malachi answered. "Good rule, though. Never go very far alone."

Out in the passage, Juan stopped and looked at Lena. "You realize that we're trapped, that our lives may be over?" Before long they would be lying motionless, gazing up at the view with empty eyes as the ship went on its way.

She touched his hand. "We might survive to live somewhere else, Juan. Isn't that possible?"

"No way to tell. The choice might be agonizing if the ship arrives at a livable planet. If we don't stay aboard, we'll lose all chance of returning — but if we stay, we'll lose a chance to survive."

She gazed into his eyes and asked, "Did you leave anyone special behind?"

He looked away. "No. There hasn't been anyone lately."

"Somehow I imagined you with a wife and maybe even a child or two, someone you wouldn't be quite so grim with. You never mentioned anyone, but I thought you might be one of those people who keeps his personal life walled off from his professional one."

He said, "I do, so you're not entirely wrong."

"I thought your moodiness might mean that you missed someone."

"No, my moods are entirely my own."

She smiled. "And I imagined you as this brooding man with deep passions you only shared with someone close to you."

As she spoke, the phantom of the wife he had never had became oddly real for a moment. He looked directly at her. The color rose in her cheeks, and she lowered her eyes. "I was sure," she said, "that some woman had caught a good-looking Latin type like yourself. You probably think I'm a cold, dour Scandinavian. Well, I'm only half-Norwegian, but I grew up there."

"Maybe I'm more like your stereotypical Scandinavian," he said, "rather than a hot-tempered Hispanic — I never really thought about it." He was si-

lent for a moment. "Did you leave someone behind?"

She shook her head. "I almost married a couple of years ago. It ended rather well — we both decided to part at the same time, so there was no bitterness, only a shared regret that it couldn't work. I think we were both too used to our solitary habits. We've been distant friends."

"You did better than I did," he said, recalling the accusations thrown at him in his younger days — that he held too much of himself back, that there was no room in his life for anyone else. His few relationships had ended badly, leaving him resentful of the disorderly emotions that got in the way of his work — which only served to confirm the complaints made against him. It was easier to settle for the occasional encounter with women who made no demands.

"Juan —" she started to say, and he felt her fear.

"We won't give up easily," he said, turning away. "Let's work our way toward the outer lock."

March 28, 2022. It's nearly a week since we left Earth, Juan wrote in his notebook. The pages were few and small, forcing him to scrawl in a compact, artificial hand. Ship's oxygen seems higher than normal; we've felt light-headed once in a while. It's warm enough, so we packed away our heaviest outer clothing. We've been saving our liquid waste in bags, against the day when we might have to try the water purification tablets on it. Solid wastes go down the drop tube and seem to disappear well enough. The ship has made one jump per day, accelerating each time in preparation. Magnus thinks it's searching for something. I wonder if he's as astute as he seems or just a good guesser. His scientific knowledge is certainly larger than he's admitted to. Food is lasting as long as expected. He paused, then added, Mal smoked his last cigarette today, looking like a condemned man about to be shot.

Overhead, the stars were again fading toward ultraviolet. Juan closed the notebook and slipped it into his shirt pocket. He scratched his beard and looked around at the sleeping figures. Thirst, he realized, would soon replace hunger and anxiety. Sleep would cease to be an escape, and become death's ally.

He lay back and closed his eyes, thinking that he had written about the food as if to praise it for proper behavior; perhaps it would be flattered and not dwindle away.

The universe was a facade of white sky and black stars. "I felt stupid," Magnus was saying from somewhere behind it, "as if I were taking an intelligence test."

Juan opened his eyes. Lena and Malachi were up, sitting with Magnus. The blue-shifted central stars in the forward view were about to disappear.

Magnus turned to him as he sat up. "I went into that room with the cubbyholes."

Juan felt annoyed. "You shouldn't have risked that door again," he said, "and you shouldn't have gone alone."

"It's clear now."

Juan stood up. "So what did you learn?"

"I'll show you," Magnus said excitedly.

"That's a good walk," Juan replied. "We have to save our strength."

"You won't have to. I found another chamber exactly like it nearby, thinking there might be one. You'll see why."

Single file, they followed him through the door. Out in the passageway, Magnus counted off the chambers. "This one." He stepped forward and went through the glow. Malachi followed.

"Go on," Juan said as Lena glanced back at him. She smiled, then turned and slipped through.

He stepped forward —

— into the blue-lighted chamber.

Magnus and the others stood before the wall of square cubbyholes, staring in silence. "This one here," he said.

Juan peered in. A bloody hand lay inside.

"As if freshly cut from my arm," Magnus said. "I put my hand in. The chamber glowed like the portals and there it was, down to the dirt under my fingernails. The principle seems an extension of the fluid doorways — direct manipulation of matter at the most basic level."

"Yummy," Lena said. "We'll bring all the food and water we have left, and all the scraps."

Magnus chuckled and pulled the hand from the chamber. "See, there's the mark where I wore my ring." He put the hand back. "If I take it out now, still another will appear."

"Did you have to use your hand?" Juan asked, feeling both relieved and repelled by the sight. "You might have lost it, for all you knew."

Lena nudged him. "Think what it means!"

"You have to take chances sometimes," Magnus said, "if you want to learn anything."

"If it works on our provisions," Juan answered.

"Let's try it," Lena said. "I'm hungry."

Malachi gave them a sad look. "I should have saved one cigarette."

"Be happy you've quit," Lena said.

When they had piled all their remaining provisions on the table-like protuberances, Juan picked up a bar of soap and stepped up to the wall.

"You have strange tastes," Malachi said.

"If it doesn't work," Juan said, "we won't have lost much, since we can't wash anyway."

"Put it in, Obrian," Lena said.

Juan slipped the bar inside and waited. "Nothing. Maybe the hand was a

fluke." He glanced back and saw Lena pale.

Magnus came up and removed the bar. The chamber glowed. A second bar appeared. Magnus removed the soap and handed it to him. Juan looked at it with relief and let out a sigh, realizing that he had been holding his breath.

"I wonder what those larger chambers near the floor are for," Malachi said.

Magnus took the new soap from Juan's hand. "We can risk this."

He stooped and placed the bar inside. The chamber glowed as he withdrew his hand. "Gone," he said, straightening up. "That clearly suggests a garbage toss. I'll bet this thing recycles mass. If there's not enough garbage going down there, these upper chambers may not work."

"Let's do the food and water," Lena said nervously.

Juan helped her feed provisions into the chambers. His hand shook a little as he put his nearly empty canteen inside. The chambers glowed as Magnus and Malachi removed the originals and piled them back on the table. Juan grabbed his canteen and took a swig.

"Wait!" Lena shouted. "Maybe we should test it."

"I'm the test," he said, gulping more. "Tastes just fine." He handed her the canteen. "Go ahead. The worst thing it could be is left-handed. Magnus's hand wasn't turned around, so I think it copies accurately."

Lena took a long sip and smiled. "Make some more, quick." She passed the canteen to Magnus, who took one swallow. Malachi emptied it.

They drank water as they filled a second table with provisions.

"If I even had one cigarette butt," Malachi said, "my supply would be unlimited."

Lena said, "You smoked them down to nearly nothing. You'd have to go down the drop tube to find the butts."

It was a tedious procedure to top off the four canteens and copy them. "We'll be able to shave," Juan said as he started the process again.

Magnus bit into a bar of chocolate. "I'm glad I saved this one."

"Let's make a proper dinner of it," Lena said, sitting down cross-legged at one of the tables. Juan sat down next to her as the others took their places. She passed around vitamins and packets of rice, fish, and vegetables. They took out their mess kits and cutlery.

Magnus belched. "Excuse me. Too much water."

"Well, we won't have to shoot ourselves, after all," Juan said, "but we're still on a wild ride to nowhere."

Lena looked at him sternly. "We'll worry after we've eaten and rested. Don't spoil your digestion."

"He's right," Malachi said. "You've probably never seen starvation. A bullet for each of us would have been essential." He grinned. "But now we could arm a good-sized militia in about an hour!"

"We should copy the ammunition," Lena said, "and a weapon or two."

"It wouldn't hurt," Juan said as he mixed rice, fish, and vegetables in his bowl.

8. Suncore

The ship moved through an endless fog, as if feeling its way to a hidden port through treacherous waters. A dead gray light streamed into the center pit of the drum-shaped chamber.

Juan sensed a massive presence ahead. "Where are we?" Lena asked as they stood in a circle, looking upward.

The ship's acceleration had again blacked out the forward stars; a burst of blue light had marked another jump, and the ship had been approaching a yellow sun; then, in the interval of a slow shutter click, the sun had disappeared and the ship has slipped into this gray oblivion, drifting forward toward a pulsing thing that would not show itself.

As he peered upward, it seemed to Juan that the object drawing the ship to itself was passing in and out of reality with a slowing, heart-like pulse, and that his own heart was beginning to match that ponderous beat.

The star disappeared as the child of the starcrossers dropped the ship into otherspace and let the suncore station pull it in.

Stations had once circled the suns of the web, sweeping outward when a star bloated into a red giant, pulling into close orbit when it contracted into a hot dwarf, drawing energy without pause and feeding it through the sub-continuum.

Stations embedded in suncores were more efficient; from their congruent loci in otherspace, accumulators tapped a star's energy up to the moment of fuel exhaustion or ultimate gravitic collapse. Each flickering core fed the arteries of power that pulsed energy into the ships of the starcrossers.

Station minds monitored the life of a sun and gave warning when the core-flux reached dangerous levels, in time for the base complex to abandon its congruent otherspace core position and relocate to another star.

::Suncore attainable:::

A black globe appeared in the glowing fog. Cables snaked out into the mists, each length ending in a gnarly device.

"It's massive," Magnus said. "Maybe a hundred times larger than this ship."

The ball filled the entire view. An opening appeared at the equator, and a beam of white light stabbed into the gloom. The ship turned into the beam, washing out the viewspace.

"We're going in," Magnus said.

* * *

As the docking cradle held the child of the starcrossers, station minds reached into it and began scanning and repair sequences. Power surged in and reshaped weakened structures that had too long resisted fatigue and random noise. The ship's systems first became fluid, then whole. As new information flooded the core memory, one missing item of data became a question:

::Where are the starcrossers?::

The biped life forms on board resembled the starcrossers, but gave no commands, made no plans, and did not respond to queries.

The station minds withdrew, leaving no answer. Alone, the child of the starcrossers waited.

The outer lock was open when they came to it. Juan approached warily and gazed out into a vast lighted realm.

Magnus grunted. "Look at this place!"

"Can we go out?" Lena asked.

"It might not be wise," Juan said.

Malachi took a deep breath. "Good air?"

Magnus said, "So we share with the builders something of the natural world from which we both sprang."

Malachi smiled at him. "They still might have been big slimy things that slithered up and down the spiral passage."

The strange light felt pleasant on Juan's face, inviting him to step outside. "It seems safe enough," Lena said. "Doesn't this open lock suggest that the ship won't leave without us?"

"We can't be sure," he answered. "If we lose the ship, we break our link to Earth, not to mention our supplies."

"It's like an afternoon," Lena said, taking a step outside.

Juan looked up. The yellow-amber light came from everywhere. There was no visible ceiling. A smooth amber floor surrounded the ship.

"Maybe it won't leave unless we're inside," Lena said. "It only left Earth when we came aboard."

"A regular ferry," Malachi quipped. "You may be right."

"Lena, come back," Juan said. "I don't think we should leave the ship."

Magnus clapped him on the shoulder. "My feeling is that we should all go out together, or all stay."

"I'm as curious as you are. Let's wait a while and see if anything happens."

Lena came back inside. They sat down in the open lock and gazed out into the station.

Magnus turned to Malachi. "Big slimy things, you said. Come to think of it, the ship does remind me of a nautilus shell. The builders may have been intelligent mollusks."

"Spirals are everywhere," Lena said. "You'll find them as tail-like flagella

in bacteria, in spiders' webs, DNA strands, the horns of rams, and in the structure of galaxies."

"Figuratively speaking," Malachi said, "human progress has been described as an ever-widening upward spiral."

"Sage snail, within thine own self curled," Magnus recited.

Juan listened to their conversation, wondering why the mollusks had abandoned their ship. "Stay here," he said as he stood up and went out onto the amber surface. He gazed down at his reflection as he walked.

After a hundred meters he turned and looked back at the ship. Most of the sphere was below the polished floor. The uppermost section dwarfed the three human figures in the lock, but seemed small in the surrounding space.

He motioned for them to come out; they hurried toward him. "Maybe we can learn something to help us get home," Lena said. "I wonder where this place is."

Juan looked at Magnus, then at Malachi. Both men nodded at him. "We're thinking the same thing," Magnus said.

Juan turned to Lena. "He's right. I think we're inside a star."

9. Otherspace Station

The amber glow warmed them. The floor seemed to soften under their feet, as if trying to please. An ocean flowed beneath the polished surface. Juan noticed yellow flashes in its depths. The floor seemed endless, without visible structures. It reminded Juan of a bare stage set, waiting to become a time and a place.

"I don't feel any ventilation," he said.

A gentle breeze touched his cheek, as if in answer to his comment. Malachi started at the coincidence, gave Juan a puzzled look, and said, "Inside a sun answers Blake's question — 'In what furnace was thy brain?'"

"What are you talking about?" Lena asked.

A great roar sounded overhead. "That," Malachi replied, grinning as a giant tiger rushed toward them across the floor. "Stand your ground!"

Juan grabbed Lena's hand and pulled her aside. Magnus dodged left and slipped, landing on his back. As Juan and Lena backed away, Malachi faced the animal.

"Mal!" Juan shouted.

His friend waved at him, as if in farewell, and the tiger slipped through him. Magnus scrambled to his feet. They hurried over to Malachi as the big cat faded into the distance.

Lena pointed. "Look there."

A shape drifted toward them. Juan made out a head and two arms on a massive torso. In a moment they saw a face — human flesh tones, large aqua globes for eyes, a thin slit for lips, and a flattened nose. Grotesque as it was,

the face seemed expressionless. The arms hung motionless as the huge body slid forward.

"Two thumbs on each hand," Malachi said. "A rather anthropomorphic mollusk, I'd say. Which of us is responsible for this?"

Magnus said, "It could be an unconscious composite, based on recent conversations we've had."

They stood still as the figure passed through them. Juan glanced at Lena. Her face was pale, but she smiled.

A saw-toothed skyline appeared. "That's mine," Malachi said, "but not quite."

"Maybe the programs can't tell us apart very well," Lena said, "so we're getting unintended mixes." She knit her brow as she spoke, Juan noticed, and avoided his eyes. Her hair, although combed, was now a darker blonde from lack of washing, but her blue eyes and strong-boned face more than made up for it. He wasn't looking his best either. "What is it, Juan?" she asked, confronting his gaze.

"He's just dismayed," Malachi answered for him, "by our lack of imagination. Give human beings a wish-machine and they'll conjure up banalities."

"This place could be dangerous," Juan said. "Even though the apparitions lack substance, we might be affected."

"How?" Lena asked.

"We might call up very personal, unpleasant things."

As they went back toward the ship, Juan noticed that the backache he'd had from sleeping on the floor was gone. A restful feeling crept through his muscles, as if he'd just awakened from a good night's rest.

He stopped and looked at his friends. "I'm suddenly feeling very fit. Is it the same for any of you?"

Magnus nodded. "It's very clear. The arthritis in my left shoulder is gone."

Malachi examined his left wrist. "The scar I had here from when I cut myself with an ax as a boy is gone."

"That means my appendectomy scar may be gone," Lena said.

Juan checked his thumbs and right forefinger, each of which had been cut open seriously over the years, and couldn't find these scars. "So this place is more than just a recreational area," he said.

"It's an all-around make-you-healthy place," Malachi said, "in body and soul."

"Which we don't know how to use," Lena added. She turned away and started to search for her appendectomy scar. "That surgeon did such a bad job — yes, it's disappeared!" She smiled as she turned around; the color was coming back into her face.

Malachi lifted his arm over his head. "I'm going to try something."

"Mal, don't," Juan said, too late, as a crowd of alien figures appeared

around them. Strange, melodious sounds filled the air. The sky turned dark blue. Two large moons rose through snowy white cumulus clouds. Towering, vaguely familiar buildings appeared, creating a wide plaza. Odors of chocolate and baking bread wafted in on a cool breeze.

Juan looked down and saw a short humanoid pass through his chest and back into Lena. For an instant its alien eyes gazed at him from her face. Magnus and Malachi bumped into each other as the biped retreated through them. Lena whirled around as if asleep. Dancers formed a maelstrom of bodies around them as a distorted love song began to wail over plucked string sounds. Juan heard a distant breathing, which seemed to be trying to catch up with the music. As he was drawn into the rhythms, he wondered if these might in fact be genuine aliens. Evolving under strange suns, they also celebrated life. Did they love and hate beyond the needs of survival?

The maelstrom quickened. Lena, Malachi, and Magnus seemed to be struggling to learn the dance steps as the figures flowed through them. Juan focused more closely on the alien faces. They seemed to be hairless children, almost cherubic. Then, slowly, as if shy of his scrutiny, the whirling forms began to fade, like a storm moving out to sea. Suddenly, he feared that his friends would fade with it, but in a moment he was again alone with them in the quiet, amber afternoon.

Malachi wandered up to him. "It wasn't all mine, even though I started it."

"It was exhilarating," Lena cried, radiant.

"We'll never know," Magnus said, "what each of us contributed."

Juan said, "We can't control it."

Lena pointed and he turned around. A huge slug was crawling after them, red eyes full of hatred.

"Not another mollusk," Malachi said. "Give it a rest, my friend."

"Why do you think it's mine?" Juan asked.

"Go ahead, wish it away."

Juan waved his hand and the slug faded.

"It must be a deep fear of some kind," Lena said.

"Would you prefer giant bunnies or geese?" Juan asked. "How about a dragon?"

Malachi shook his head. "I don't think arbitrary orders are deep enough to trigger the system."

"Dragons!" Juan shouted.

Nothing happened.

"You're right," Juan said. "Only old nightmares or things we take seriously, which suggests a therapeutic function. I wonder if we can influence the ship in this way, but more consciously?"

"That might require specific commands," Magnus said, "which we don't know how to give. Closing our eyes and wishing the ship home would be too

vague."

"But we can't be sure," Lena said.

Magnus shook his head. "If there is such a system, it would be too much to hope that we could hack our way into it."

"We should try it anyway," Lena said, "inside the ship."

The viewspace in the drum-shaped chamber was off when they came back from dinner in the chamber of cubbyholes. Magnus stood up straight, closed his eyes, and concentrated. The viewspace remained off.

"Our minds are just not matched to this system" he said, opening his eyes. "If there is such a system."

"But we can't be that far off," Lena said, "since we can do things outside."

Magnus smiled. "That doesn't demand specific navigational commands."

"I think I'll go out to the lock," Malachi said, "and see what's doing out in the station."

Lena glanced at Juan as she sat down.

"I'll go with you," Magnus added.

"Don't wander outside!" Juan called after them. He watched them pass through the glow, then lay down on his sleeping bag.

Lena smiled at him. "Do you think they're matchmaking?"

He looked away. "This is no place for it."

"And you don't like me much, do you?" she asked.

He looked at her. "I do enjoy your company."

"And I was sure there was something wrong with the way I chewed my food."

He grimaced and turned on his back. "No, there's nothing wrong with the way you eat. Tell me one thing, though; what do you think of Mal and Magnus?"

"Isn't it obvious? I like them both a lot. Mal is clearly your best friend, and I think you'll come to appreciate Magnus much more than you do."

"You're right about Magnus." He closed his eyes, realizing that he was pushing her away with conversation. Their situation was complicated enough, he told himself, knowing that he was following his usual pattern, backing away from people because they were too hard to understand. Besides, she was only being friendly. He looked over at her and saw that she had closed her eyes and seemed to be asleep.

When they came up to the open lock the next day, a giant figure was kneeling in front of the ship and peering in at them with a single eye.

Lena grimaced. "I don't like to be startled in the morning."

Juan snapped his fingers and Polyphemus dissolved. Lena glared at him, then laughed.

"In its own way," Magnus said, "something knows we're here and is responding to us."

They sat down in the lock. "Watch this," Malachi said.

A lightning storm flashed in the distance. Blue-black clouds rolled toward the ship.

"It's strange," Malachi said, "to hold that in my head and see that my will moves it."

"Perhaps this place is only a toy," Lena said. A hand appeared over the storm and crushed it against the amber floor.

"Juan?" Malachi asked.

He nodded, then looked up and saw his face hanging over the horizon, eyes closed as if in worry.

The eyes opened and the face smiled. "I couldn't help it," Lena said, laughing. As he stared into his own face, the eyes opened wider and stared back at him.

Malachi laughed. "This could become embarrassing. But not to worry, we're all youths at heart. No middle-aged *angst* for us! Just sensible adults facing the unknown."

"Quiet," Juan said as the head faded away. "I hear something." A wail drifted up from inside the ship, reminding him of the tachyon signal. His face tingled. "Move back." They stood up and retreated. The circle glowed, closing the lock. They fell back through the inner lock and watched the glow seal the chamber.

The black sphere was growing smaller when they entered the drum-shaped chamber and hurried down into the pit.

"Now we'll see," Magnus said as the station receded into the grayness. The host star appeared in a yellow flash, already showing a diminishing disk. "We've just come out of that sun, and out of another kind of space. The ship's jumps have already suggested that. Is that a fair guess, Juan?"

"It also suggest that the station gets power from the sun, and the ship gets it from the station. What do you think, Mal?"

"Either the ship stores power after charging up," Malachi said, "or the station transmits energy to the ship in some way."

"There may be other stations," Lena added. "Why did we leave? Maybe you made it happen, Magnus?"

"More likely the station has serviced the ship," Magnus said, "and sent it on its way. Or it's an emergency departure. Something may be wrong with the station or with the way it's picking up power from the star."

The beating heart, Juan thought, the pulsing he had sensed during the ship's approach to the otherspace station — that had been the subliminal rhythm of the station's mighty core engine draining power from the star. As he looked up at the bright photosphere, he realized that the star might go nova or distend into a monstrous red giant or even collapse into a black hole.

"I wonder how many other core stations there are," he said as they sat down on their bedrolls.

"A web of these suns," Magnus replied, "would free the ships of a starcrossing culture of all need for fuel. It's possible that power is transmitted to ships through the same kind of short-space the vessel uses when it jumps."

Malachi cleared his throat. "A bit hard on the suns, don't you think?"

Magnus sighed. "As one is exhausted, another cuts into the system. It would take some time to exhaust a star."

"We're still only guessing," Juan said.

Magnus pointed at the receding sun. "I can't believe this ship is carrying the fuel it needs to do what we've seen. It's magnificent and wonderfully obvious. That star and all the others that have been so tapped gave the culture that built this ship all the energy it could ever need, for whatever purposes it chose to pursue."

"So what happened to them?" Juan asked as the ship's acceleration began to redden the star's bright disk.

They were silent for a few moments.

"I wonder," Lena said, "if we stimulated the ship's departure, perhaps unconsciously. Maybe in time we could coax the ship to tell us everything it knows."

Malachi said, "Maybe the starcrossers learned everything there is to know about our universe, completing all their sciences, and decided there was no point in going on. I'd like to know everything, if only for a few moments, merely to satisfy my curiosity. I rather think I would give anything for that. But, of course, I would wish to forget, since nothing would be interesting in an existence where discovery was impossible."

Lena said, "A state like that might have satisfactions we cannot imagine."

"Perhaps that is what happened to the builders," Magnus's dark shape said. "The explosion of their knowledge catapulted them into a nearly divine, immaterial state. They may now exist as a form of sentient, patterned energy, and all this — their ships, their web of suns — is a shell they no longer need."

Hand-me-downs, Juan thought. Discards that we can only inherit, never equal.

"Ghosts," Lena said. "They may be all around us, watching."

10. The Awakening

Magnus lay awake. Sleep was a distant shore. Overhead, the universe was darkening. He imagined the smooth mesh of the ship's systems, maintaining the vessel's inner states while pushing it toward jump-speed. He saw a fleet of ships drawing nourishment from the web. He dived into galactic cores, flashed to the quasars, outpaced the expansion of space-time. These ships could go anywhere in the cosmos, and perhaps beyond.

He sympathized with Juan. Physicists might work for a century and fail to understand, much less duplicate, the technology that grew out of the alien science. Juan had searched for alien civilizations and was now trapped by the one he had found. Perhaps living in the ship for a while might purge them all of old habits, enabling them to see beyond the pride of species. The ship was a puzzle box of knowledge, waiting for a ready mind. . . .

He had nothing to go back to; his son was an industrial spy somewhere, unable or unwilling to keep in touch. His more ambitious professional friends avoided him in recent years, pitying his lack of success, skeptical of his renunciation of the big prizes. They didn't feel his disappointment in people, and with the ways of civilization. Like Juan, Magnus weighed human potential against accomplishment and found it inadequate or much too slow. He saw the same old darkness in the younger man's eyes. Pascal's infinite spaces did not terrify him, but the inner abyss had frozen his heart. Perhaps Lena would give Juan the warm island he needed.

Trying to understand the ship had irritated old wounds and disturbed old ambitions. Magnus suspected that if he could only look at the ship in specific, new ways, its mysteries would bare themselves. Deep within him, his younger self was laughing at his vain hope of seducing the data.

Where was Eliane? Did she ever think of him or their son? He pushed her memory away, hoping to drown it in the bog of desires, fears, and prejudices at the back of his mind, where the loves and ambitions of a lifetime had been dissolved by the acids that still bubbled up from that cesspool.

The way ahead was black now. The view flashed blue as the ship jumped, but no nearby star appeared; only distant suns waited as the ship accelerated again.

"How old can the web be?" Lena asked, sipping her copied coffee as they sat in the alien cafeteria.

Juan shifted his weight on the hard floor and put his elbows on the table. "If the universe is twenty billion years old, then it might have been built as long ago as five."

"That's enough time," Magnus said, "for stars in the system to be exhausted."

"Or for a hundred civilizations to perish," Malachi added.

"I wonder where we're going," Lena said.

"The ship is clearly making a series of jumps," Magnus answered. Juan noticed a growing tension in the engineer, as if he were making some great internal effort to keep himself together and alert. I like him better than I did at first, he thought. "No way to even guess direction," Magnus said, scratching his head. "The web may be limited to our galaxy, or it may reach across a whole cluster."

"Could they have unified the universe?" Malachi asked.

Lena's eyes widened. "Can the web be that large?"

Magnus frowned. "Why not? What do we know? They obviously unified some major portion of it."

Malachi asked, "Why abandon such a system? Maybe they developed an even better one. The builders may still be around somewhere."

Juan shook his head. "We talk, we speculate, we make assumptions — soon we'll believe anything!"

Magnus gave him an irritated look. "Juan, we are being shown clues, however vague they may seem."

"It doesn't help us take control of the ship."

"That's because we're thinking in a hands-on way, but there are no buttons to push or levers to pull."

Lena asked, "Do you think the ship is a conscious thing?"

They looked at her in silence.

"What did I say?" she demanded.

"She's right," Malachi said. "We have to say hello to the ship. British folk say hello to anything — chairs, tables, vases, whatever."

Magnus sighed. "However general and empty of content such a prescription seems, that's what we will have to do — communicate what we want to whatever system runs this ship, in a way it will understand."

Hopeless, Juan thought, surprised at how the censorship of common sense and ordinary experience lived on in his mind. His life had been devoted to counter-intuitive theorizing, to abstract mathematical reasoning about matters far removed from everyday life, and still the voice of the simple beast whispered in the back of his mind, denying everything that could not be seen or touched. To an Amazonian aborigine, Juan Obrian would seem a silly figure — a man without wife and family who had gone to an ice-bound land for reasons having nothing to do with food, shelter, or raw materials, and for his faults had been snatched up by a sleeping god and carried into the heavens.

"Even if we could learn the ship's language," Juan said, "it might be the syntax of a purely automatic design or one that has fallen back into pure routine."

"We have to adapt," Magnus said.

"How?" Juan demanded. "By wishing?"

"Everything I've seen," Lena said, "seems to imitate a biological fluidity. I've had the feeling that the ship is run by some sort of intelligence."

"We're grasping at straws," Juan replied.

Malachi sighed. "Come on, Juan, what if skimpy data is all we can get?"

"Be honest," Lena said. "How many of us have had the feeling that the ship is sentient, that maybe it's watching us and waiting for us to do something?"

"I have," Magnus admitted.

Malachi nodded. "It's there, but don't ask me to interpret."

"So we all have feelings and suspicions," Juan said.

"Most animals know when they're being watched," Lena answered. "Subtle information slips between subject and observer —"

"You're just spooking yourself," Juan said.

"You may be right," she shot back, "but we must consider even the smallest possibilities, with our lives at stake."

Juan was silent. "Okay," he said at last, "we're not in our labs, but that's no reason to abandon all that we've learned and trained for."

Lena touched his hand. "Juan —"

He drew back, as if she had reached inside him. He saw her try to hide her surprise at his rejection, then looked away. A two-bit biologist and one crank engineer, he thought. Titus had sent them along because they were nobodies and could be spared. No, Lena didn't deserve that — how could he think it? He felt as if he were being assaulted, forcing him to raise the mental walls that had always kept him apart from others.

"What is it, Juan?" Malachi asked with concern. "You don't look well."

"It's nothing." He forced himself to smile, then touched Lena's hand lightly. "Nerves, I guess — don't mind me." I'm losing my mind, he thought. He felt a rushing in his ears, as if voices were struggling to gain his attention. "Sorry," he managed to say.

"You need rest," Lena said. Her voice seemed distant. His greatest fear had always been that he might one day lose his reason. Fatigue, he told himself, clinging to the word, forcing himself to believe it.

The child of the starcrossers sought to enter the colloidal minds within its field. Chaotic images threw it back.

It scanned, seeking a common biogrammer, but found only divergent developments, nearly opaque and easily damaged.

The ship tunneled through an infinity of coal and finally burst into a huge vault where the stars were black cinders suspended from wires. . . .

Juan opened his eyes and saw blue-shifted stars. Stupid, he thought, how the sleeping mind rearranges things as if they were furniture, to please or terrify. . . .

His eyes teared, and he felt suddenly that something was interfering with his thoughts, triggering involuntary emotional responses. I've cracked up, he thought, and sat up shouting as pain stabbed through his head. ☀

[*"Stranger Suns"* will conclude in the March 1991 issue of Amazing® Stories.]

THE LITERARY CAREER OF GEORGE ZEBROWSKI Current Directions . . .

I have been described as a "hard SF writer with literary intent" — which makes me sound like a difficult person about to commit a crime of some sort. What "literary" means in this description, I believe, is that I pay attention

to the writerly virtues of style, characterization, and lucid storytelling, as much as I do to what makes a work science fiction — its scientific facts, speculative ideas, and philosophical considerations. Nothing wrong with that; I wouldn't think much of any "hard SF" writer who deliberately leaves all that out.

James Blish, a favorite writer of mine, once said that SF should be hard (thoroughgoing) all the way through — in its ideas and literary virtues, which seems to me to be beyond argument as a prescription. It's the ideal I started with as a writer.

The knowledge of what one does as an SF writer can be clearly stated, but not easily practiced. One writes fiction that deals with the human impact of possible future changes in science and technology. Even if you remove "science and technology," you still have "the human impact of possible future change." You might remove "future," since many SF works are set in the present or past, but you can still substitute "imaginary but plausible" here and not violate the spirit of SF. The "human impact" makes it literature; the "plausible imaginary changes" makes it SF. How well the "literary" and "science-fictional" conceits come out depends on the ambition and skill of the writer.

... and Past Achievements

Macrolife. Harper & Row, 1979; Avon paperback, 1981; British edition: Futura, 1980. Selected by *Library Journal* as one of the 100 all-time best works of SF, and reissued by Easton Press in its leather-bound classics, signed by the author, with an introduction by Ian Watson, 1990.

The Monadic Universe. Ace, 1977; expanded edition, 1985. A collection of short fiction.

The Omega Point Trilogy. Ace, 1983. Includes *Ashes and Stars* (Ace, 1977) and the only edition of *Mirror of Minds*, the conclusion of the trilogy. The only definitive edition.

Sunspacer. Harper & Row, 1984. Selected by *Book for Teens* as an outstanding book of the year; also chosen by *Anatomy of Wonder* as a core collection book.

The Stars Will Speak. Harper & Row, 1985; Starwanderer paperback, 1987.

"Heathen God," short story. Nebula Award finalist, 1972, in *The Monadic Universe*.

"The Eichmann Variations," short story. Nebula Award finalist, 1984, in *Light Years and Dark*, edited by Michael Bishop; Berkley, 1984.

"The Idea Trap," short story. Theodore Sturgeon Award nominee, in *Universe 16*, edited by Terry Carr; Doubleday, 1986.

THE FIRST SUPPER
by John J. Ordover
art: George Barr



The author was raised in Brooklyn, New York, although he has lived in various places around the country. He is an alumnus of James Gunn's Science Fiction Writer's Workshop, a former member of the TWG Writer's Group based in Lawrence, Kansas, and a former editor of Rendezvous, a Kansas-based literary magazine. Currently, he works in New York as an assistant at the Susan Ann Protter Literary Agency.

This is his second story sale; his first, "Thus I Refute Kafka," appeared in the September 1990 issue of New Destinies.

On an early morning at the beginning of a slightly different creation, a man and a woman stood facing each other at the edge of a forest. Breathed into life short moments ago, they knew little except that they were to be tested. Not speaking because nothing had yet been named and without names little can be said, they walked together into the woods to look for food. As they stepped under the trees, a warning welled up from deep inside of them: Choose carefully what you eat, for on that choice your future will be judged.

They soon found a small green plant heavy with soft red berries. The man put forth his hand, then hesitated. Without words they decided to look onward, feeling that when they found what they should eat, they would know it for certain — if they were worthy. On they walked, passing up many tempting roots and tubers and many small fat animals, their hunger growing — until a voice called down to them and they looked up into a wondrous tree.

The tree had many branches, each bearing a different unnamed fruit, each fruit a different color yet all ripe and beautiful. The two breathed deeply and the glorious scent of the tree washed over them. The voice came again, and now they saw the source of it, stretched out on a lower branch.

It was long and thin and mostly green, with a fire-pattern of red along its back. Shaped like a tube, its body ended in a fanged mouth with a red, split tongue that darted back and forth. It spoke to them again.

"I come to aid you," it said. "Here on this tree is what you should eat, what you must eat; here are all the answers you will ever need; all that you must do to be shown worthy."

The two were unsure, doubtful that the answer to the challenge set them would be found so soon or so easily. But the thing spoke on, its slick flowing voice preying on their hunger, hissing its way into their empty stomachs until at last the woman could bear it no more and reached quickly up into the tree.

It was the first supper, and when it was over, the man and woman lay in each other's arms, their hunger satisfied, and watched the setting of the not-yet-named sun. Later, when the job of naming had been done and they had made other suppers, they would agree that *snake* tasted very much like chicken.



IN LEGEND LANDS
by Daniel Stedronsky
art: George Barr



"In Legend Lands" is Daniel Stedronsky's first professional literary sale, though he has sold humor articles, film reviews, and poetry to various non-paying markets. He is both writer and artist, and as an artist, he was recently named a semifinalist in the L. Ron Hubbard Illustrators of the Future Award.

Over the years Daniel has made his living in a variety of professions. "I've been a construction laborer," Daniel claims, "a house painter, life-drawing model, silk-screen printer, proofreader, dishwasher, martyr to various causes, Kabuki Ghost Warrior, bad baby-sitter, and volunteer all-around nuisance." He also does stand-up comedy; he does not, however, do windows.

— dedicated to the memory of Robert E. Howard,
with condolences to the unfortunate plight of
Karl Edward Wagner's larger-than-legend character Kane.

The River Styx flows whispering;
Its myst'ry-misted song to sing.
Its waters, black as anthracite,
Trailed sensuous tendrils to invite,
Submerged my soul in darkest night —
My body it left free.

Ten thousand years I roamed this land;
Imprudently I tasted life.
And countless times I came to stand
And watch dear friends return to sand —
Watched them fall beneath the knife
Of grave misfortune, age and strife.

So on I wandered, friend to dread,
A shadow-shroud around my head
To ward off enemies *and* friends —
(But everything of course depends
On meanings justifying ends . . .
Or so it has been said.)

And in my lonely travels I
Found mastery in many things;
Learned that weaker men would die
To clear a way to travel by
Upon the bloody Road of Kings —
For of such deeds brave Legend sings.

By many names have I been known
And many times have sat the throne
Of kingdoms I have won or reared,
And into smoky crystal peered
To see once more what I had feared:
My dreams . . . turned into lifeless stone.

Yet finally found my soul regained
And understood a monstrous shame;
A wisdom won the moment when
I realized the world of men

(Like words of men) is but a game —
And win or lose, 'tis all the same.

For I have seen the black door gape
And heard fell tales from serpent's tongue;
And I have glimpsed the night-gaunt's shape
And worn the wizard's conjure-cape;
Gave ear to songs that can't be sung —
When yet considered very young.

Long-gone, a demon's daughter vowed
Her love for me, and held me near.
Her flaming kisses burned my brow,
The mark is there e'en anow —
A sign men learned to read and fear
O'er many a dark and bloody year.

For soon with all mankind I warred;
Before my charge great nations fell.
Ten million men have called me lord
And twice that ten died on my sword —
With fire and steel I served them well
And chased their smould'ring souls to Hell.

And empires raised and riches heaped
Before me, but to fare and fail.
And vanities and harvests reaped,
And legends wrought, in dark blood steeped,
I saw obscured 'neath Time's dim veil —
Yet hungered on for fruits gone stale.

So on I wandered, searching for
A way my hungers to appease;
And every beck'ning bolted door
That I from massive hinges tore
Came away with practiced ease —
I might as well have had the keys.

I sought a peak, a rarity,
Yet every challenge bowed its head.
A world without disparity,
All bleak familiarity;
Brave Legend's loves and lusts had fled —
A conqueror, I'd killed them dead.

Then seen at last through weary eyes,
I wondered at the things I'd done.
They seemed a sham in dim disguise,
A dull conceit, a pack of lies;
A phantom shadow in the sun —
An empty victory is none.

And so I took myself to bide
In desert wastes, far-flung from men,
Where midst the lonely landscape I
Might ponder well the where and why
Of these strange facts; and mayhap then
Breathe Life into this life again.

Through many years of solitude
I harkened to my heart's grave yearning;
And then one fateful night I viewed
A shower of stars, bright, many-hued,
That fell like snowflakes brightly burning —
Heralding my soul's returning.

For suddenly a voice did cry:
"Pray, listen well unto me now!
You live beneath a starless sky.
You race with Time; it passes by!
To idols valueless you bow!
Stand straight! (If you remember how.)

"You've stamped your feet on barren earth;
Seek you now a finer dream!
What can these tiny prints be worth?
Will they contribute to the birth
Of something greater? Do you deem
That they are more than what they seem?

"You've watched great nations rise and fall;
Shanties sinking into dust.
And man upon a platform tall
Hears his own voice, heeds not the call,
But tends instead to his own lusts —
It is the only voice he trusts.

"You've followed where the legends lead;
Yet still are doors you've left untried.
What legends these, of vanities?
What magic in pursuits of greed?
For *this* a billion men have died?
This voice, and wisdom, lies inside.

"Now open eyes and open ears!
Turn them inward! Learn to feel!
Cast away your prides and fears!
See? The Laughing Light appears!
Life's a road and life's a wheel;
Both are equally as real.

"You've danced to tunes that chase and hound.
Forgetting well my sweet caress.
Your music has a *saddened* sound —
Heed *me* now, lest you be bound
Eternally, to your distress,
In Legend Lands . . . all legendless."

'Twas then I saw myself in eyes
Wiped clean of dreams and deeds uncouth,
And mourned this empty life of lies;
This King of Fools! He so unwise
That through ten thousand years of youth
Could not discern this voice of truth.

Since then one thousand years have passed;
I am no more what I have been.
The conqueror, come home at last
To conquer vibrant vistas vast
That stretch out endlessly within —
And ending, once again begin.

So now I sit in peace, and lo!
A universe sits in my hands!
I'm off to far Orion, so
I cannot stay; new worlds to know . . .
I'll wander on in Legend Lands,
Creating dreams as need demands.

SPECTRES
by Norman Dupuis
art: Terry Lee

The author lives with his wife and three daughters in Calgary, Alberta. In the three years since he's been writing professionally, he has received a semi-finalist certificate from the Writers of the Future and has had one story read on the radio. This story is his first professional sale.

On the morning of that Saturday in early October when he started the countdown all over again, Doctor Adam Baker spent the boring half-hour drive from his home to the Campbell-Meech Laboratory considering the two women in his life.

There was Peg Lawton, his lover. Their relationship was two years old. Baker, who for years had felt adrift on the roughest waters, tried never to use Peg as a buoy, to weigh her down. He continually kept her at arm's length by doing so, but such was the way life had become for him, and his life had become so hard to change.

Baker hadn't yet been able to escape from the other woman, his late wife, Carolyn. The previous week of nights had been filled with familiar dreams, visions of waking to find Carolyn impossibly warm and alive and lying next to him. The dreams were symptomatic of the season. There was nothing more frightening for Baker than grappling with those spectres from his past.

He slowed his Volvo to a crawl, steering it off the deserted secondary highway and onto an unmarked gravel road. The tree line running parallel to the highway swallowed the car up. He drove two hundred yards in shadows until a guardhouse and gate set in an electrified fence came into view. As Baker pulled up, a young man wearing a navy blue jumpsuit and carrying an Uzi trotted from the guardhouse to the car.

Baker rolled down his window. "Good morning."

"Good morning, Doctor Baker," the guard said, remaining at attention beside the car. "How are you today?"

"Fine, fine," Baker answered, forcing a smile. He took a cigarette from the pack he'd bought the night before and lit it. *Damn this time of the year*, he thought, coughing on the smoke. Then, because he'd programmed the guard for more than just standing and staring, Baker said, "It's a beautiful morning, isn't it? It's very quiet here, surrounded by the trees."

The guard blinked twice and looked around. "It's always quiet here," he said dully. "Would you like me to open the gate, Doctor?"

"Please."

The guard turned and walked back to the guardhouse. Baker laughed in relief. Of course there wouldn't be any polite, conversational questions from any of them about why he was suddenly smoking again, or why he was

coming to work at seven o'clock on a Saturday morning. They were still his people; the workshop was still his haven. He had arranged everything so well.

The gate slid open. Baker took a long drag on his cigarette, put the car in gear, and drove onto the laboratory grounds.

Baker finished his tiring, unrecorded shift eleven hours later. He left the workshop, a windowless, two-story cement box, and crossed the parking lot to the only other structure on the grounds, the office complex. One day, he realized, every square inch of the building would be occupied by data-gatherers, report-writers and public-relations types. Until then, the complex and workshop were virtually his alone.

He unlocked the front doors and climbed the stairs to his second-floor office. As he sat at the windows, watching dusk fall over the half-naked forest outside, Baker felt familiar emotions boiling inside him: rage, fear, doubt about himself and what he was doing, and pain, the sharp pain of memory. These emotions never went away. He just found them easier to control when October 16 wasn't so near, when there was one less reminder of Carolyn's death present to torment him.

He lit another cigarette and tried to calm down in his usual manner by massaging the growing bald spot on the top of his head. Then he turned to his desk, picked up the telephone receiver, and dialed a long-distance number. His former father-in-law answered on the third ring.

Without introduction, Baker said, "The project is up and feeling fine."

The voice on the other end of the line tightened. "It's that time of year again. I've been waiting for your call."

As if the other man would have forgotten, Baker said, "It's a week from tomorrow. Everything will be ready."

"I'll call the others. Take good care of our little project, Adam. Take good care of it."

Baker thought, *I have a bigger stake in this than you do*. Into the phone he said, "Of course I will."

"I'll call you next Saturday morning. Good-bye, Adam."

The phone clicked in Baker's ear. He chose another line and dialed his home number.

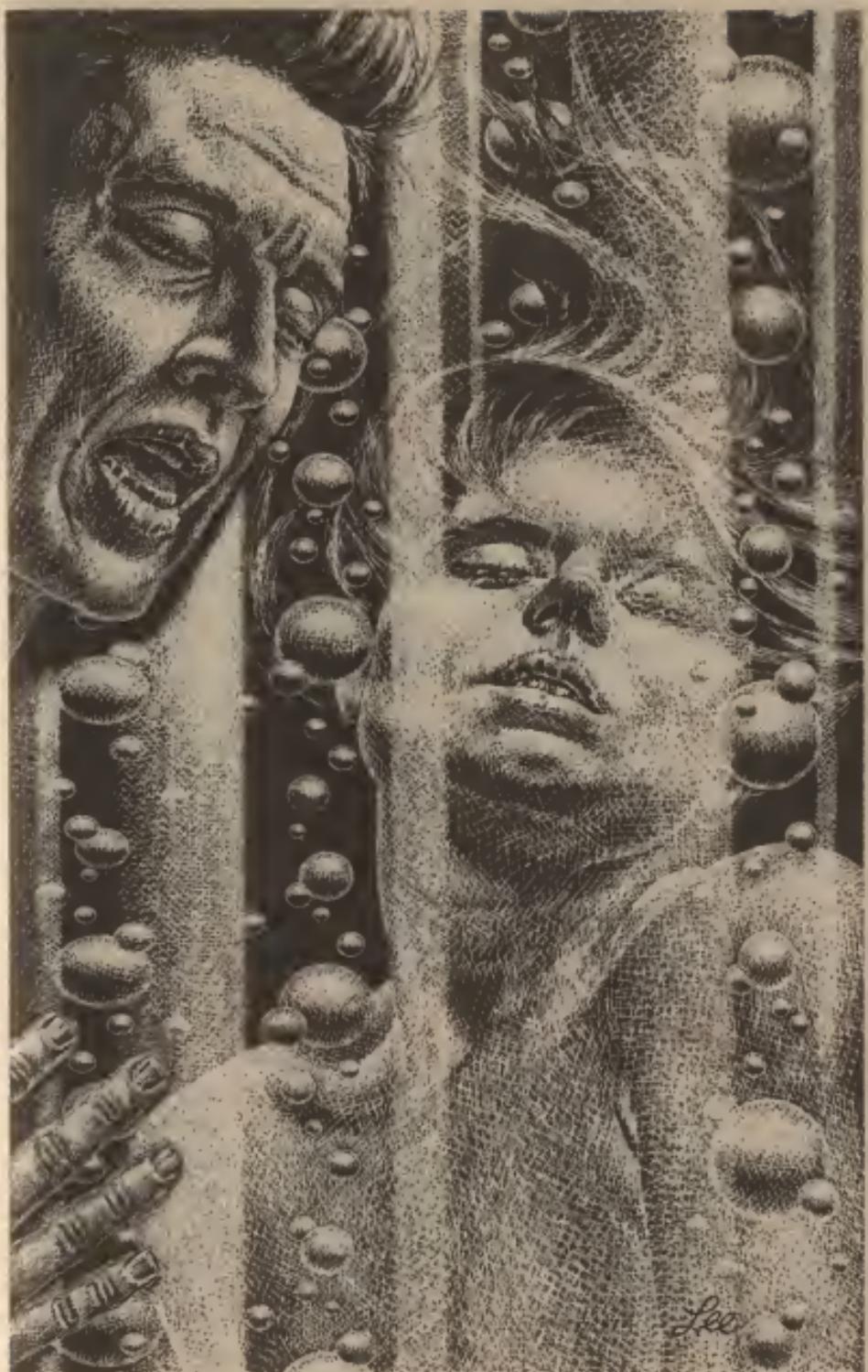
"Hello?" Peg answered in her southern drawl.

"Finally done," Baker said. "Sorry I screwed Saturday up for us. I promise to make it up to you."

"Are you finished now?" Peg asked. "Are you leaving?" Beneath the concern in her voice was an underlying sense of resignation, of her being fed up. It made Baker cringe.

She knows it's October again, he thought, *only she doesn't really know.*

"I can be on the doorstep in thirty minutes," he said. "It's only six-thirty. Why don't we go out for dinner?"



Lee

"Sure," Peg said, her voice still unsure.

"Get ready, then. I'm on my way."

Baker kept the receiver to his ear until the dial tone sounded. The right words were never there when the opportunity presented itself to say them. He considered himself fortunate that Peg had stayed through two years with him, two Octobers, and wondered if she would stay through another one.

1. Doctor Baker came to my room this afternoon to give me a tape recorder and a box of blank tapes. He wants me to start keeping a diary. The word "diary" registered well and brought up some useful information from my stubborn memory, so an explanation wasn't necessary. He told me to record what I think and how I feel as more of what I can't remember right now comes back to me. Reviewing the tapes, he said, should accelerate the recollection process.

I woke up two days ago from a long sleep. Doctor Baker says I was in a coma caused by a serious accident. It was during that time, he says, that he programmed me with information he'd feared I'd lost to amnesia: language and social skills, certain memories. Not many of the memories have come back to me yet. Doctor Baker says not to worry. He's treated patients like me before, and all of them remembered everything sooner or later.

It dawned on me this afternoon, as he was showing me how to work the tape recorder, to ask who I am or, as I rephrased it to him, who I had been. Doctor Baker said that I am a John Doe — whatever that is; I can't fish anything up with "John Doe" — and that I should think of this place as my home.

I challenged him about that because the word "home" to me has a happy meaning. This place is simply a room with a bed, a toilet, and a door that locks from the outside. Doctor Baker didn't speak to me after that. He shut himself off as easily as I can push buttons on this tape recorder, then left the room. Something about him is unsettlingly familiar, but I can't figure out what that something is. I've decided that if he won't answer my questions, I'll try to find someone who will. . . .

Wednesday afternoon brought clear skies and a north wind that screamed across the laboratory grounds. At two-thirty, Baker walked into Conrad Templeman's sprawling office on the complex's top floor and waited for his superior to hold court. Baker stood silently beside the enormous mahogany desk, partially because of his anxiousness to complete their weekly meeting and partially because he hadn't been offered a seat. He understood that having to answer to a prick like Templeman was one of the many ways life laughed in his face.

"I see little progress in the last ninety days in this group," Templeman said, pushing a stack of file folders to the edge of the desk for Baker to pick up.

"What progress there is shows in important areas," Baker replied, folding his arms across his chest.

Templeman grunted, unconvinced, and puffed on his ever-present cigar. "Will Doddard has been phoning, asking for the latest data. His people are getting ready to introduce debate on clone rights before the Christmas break, Adam. With luck, passage of an amendment is one — maybe two — years away."

"I've already modified the programming for the next group."

"Good," Templeman said, nodding. "We've got to get things moving in the right direction. It's not my lab, Doctor, but both Doddard and I would like to see a fresh batch of resurrections."

Resurrection. Baker hated the word. Templeman used it at every opportunity, thinking that he was somehow involved in the redefining of the human race.

What Baker had actually spent the previous seven years working toward was molding as "human" a clone as possible from zygote to adult, in the shortest possible time. All his work was in preparation for the day when it would be perfectly legal, and as acceptable as possible in the public's eye, for the government to use these clones for whatever it damn well pleased. Baker had never questioned the morality of the top-secret work. Even with the extensive in-vitro programming, the clones were never quite human, never quite real enough. He knew better than anyone that no man had the power to raise the dead.

"I've already got four tanks running with the new programming. I'll dispose of the bottom half of the present subjects as they appear on the curves. That will give me more time to spend on the remaining ones until the new group is ready to roll."

"Good, good," Templeman said, smiling.

Baker relaxed inwardly, happy to have satisfied Templeman for the moment. In fact, there were only four modifications left to the clone patient programming before he started turning out clones as advanced as his private project. Four modifications and his mission would be complete, his tenure no doubt terminated.

"I have heard," Templeman said, "that Will Doddard and a number of his supporters on this bill have a surprise visit planned for early November. Keep that in mind, will you?"

Baker nodded. They could come any time after October 16.

"That's all," Templeman announced. He looked up through the cigar smoke to study Baker's face. "Are you feeling ill?"

"No, not at all," Baker said, shifting uncomfortably on his feet. "Things in general are busy, and my mind's working overtime. I'm thinking of taking a couple of days off at month's end and heading up with Peg to the cottage."

"It seems to me that you always take ill in the fall. Maybe you need some

time off, a week or two instead of a couple of days. You're the one always boasting that the place can run itself."

Baker's heart started pounding. Templeman could be a mule if he got an idea in his head. "No thank you," he stammered. "I'll be fine." He picked up the file folders and waited. Templeman, already leafing through other documents, dismissed him with a wave of his hand.

All the way through the parking lot, scattering leaves as he walked, Baker felt himself burning inside. In the car, he rested his head on the steering wheel and tried to control the nervousness that threatened to overcome him. He recognized his fear of being caught. When this fear mixed with the anger that always lay under the surface of his behaviour, it became a dangerous thing.

The clone staff members were no problem; their programming was airtight. Baker's biggest fear was having someone like Templeman or Will Doddard snoop around the workshop and find one more clone than there should be. Thankfully, Templeman considered entering the workshop getting his hands dirty with someone else's work, a habit he never practised. Will Doddard was a thousand miles away in the Capitol. If Baker kept himself under control, things would work out as planned.

As he sat there, he remembered something Peg had said quietly at dinner the previous Saturday. They'd been discussing old friends.

"Sometimes I feel very small and alone when I remember people who are lost to me," she'd said, referring to two college roommates, but her look and tone of voice conveying something completely different. "It's not good to try to hold onto the past forever."

Baker hadn't known what to say. He'd not yet found the words to describe how it felt to lose the woman who, starting as a shy teenager, had loved him through all the stages a boy of sixteen must pass on his way to becoming a man. Peg knew enough of the details, though, to make a comment like that. He'd come close to driving her away at the beginning of their relationship, trying unsuccessfully to exorcise his demons by sharing his grief with her.

Now it occurred to Baker that his obsession with completing this ritual had diminished from the year before, even more so from two years past. This, he thought, deserved more consideration than his fear.

Cautiously, he began forming an escape plan.

2. So little happens around here, yet most of it is so strange. For instance, meals are brought to my room by a man in a jumpsuit just like mine. The problem is that I don't think it's the same man even though he looks the same. I've asked him his name every time he's come in, and I've gotten six different answers over twelve meals.

Another weird thing is Doctor Baker himself. He comes in twice a day. Sometimes he sits in the chair by the door and just watches me. Sometimes he asks me questions like he's trying to jog something in my memory. He

still won't answer my questions, though. I get more information from talking with the man with six names, and even that's not a lot.

Finally, there's the nightmare. I get it every time I fall asleep. There's nothing frightening to speak of, just darkness and noise, a loud snapping noise, and pain. My right arm and throat catch fire, and only waking up puts out the flames. I wake up screaming.

Part of my programming? Part of what I'm supposed to remember? Both, maybe. But I have enough on my mind just trying to figure out what's going on here. If this is part of what I'm looking for, why does it have to be hidden in this terrible dream?

3. Doctor Baker came to my room late this afternoon to say that he'd be gone for a while and that I'd be allowed to mix with the other people here. My weekend of freedom, he called it. He was nicer than ever before, almost friendly.

To prepare me, Doctor Baker explained that there are two kinds of people here, staff and patients. He said not to be surprised when I saw that the staff all looked alike and some of the six male and six female patients looked alike within their gender. Clones, he called them. I shook my head and told him I didn't understand what "clones" meant. He said it wasn't important that I understand everything.

Fifteen minutes after Doctor Baker left, a staff member took me out of my room and led me down a long hallway into a large, well-lit open area. The patients Doctor Baker had talked about were there, lounging on couches and chatting with each other. One of them, a man named Barry, finally noticed me standing in the doorway and called me over.

One by one, everybody introduced themselves. At that point, I realized that Doctor Baker hadn't given me a name yet, so I told them I was John Doe. It's one more name than any of them have, but no one seemed to notice.

None of the patients appear to be particularly smart. Barry's about the biggest and dumbest of the bunch. Another patient, Scott, started asking me questions and answering mine. He's been here the longest of all the patients and seems to be the smartest of them.

I found out that patients here spend their days learning: reading, writing, doing tests. Scott told me that he's seen patients vanish from time to time and new identical-looking ones appear in their places. No one knows ahead of time that they're leaving, and no one left behind is ever told where the others go. I told Scott that my goal was to get out of this place. Scott admitted that he and Barry have been working up the courage to try to escape.

Immediately, Barry leaned over and whispered to Scott that he would kill him if he mentioned the escape to anyone else. Then he looked over at me as if to include me in his threat. As the afternoon wore on and we spent more time together, I realized that Barry had meant exactly what he'd said. If get-

ting out of here is my goal, I'm going to have to determine if having Barry in on things is a good or bad idea. . . .

The waiter opened and poured the second bottle of wine — Peg's choice; she'd taken a wine appreciation course that spring. Baker drained half his glass in one quick mouthful and found that this vintage tasted no different to him than the first had.

He looked across the table at petite, blonde, beautiful Peg and tried to smile warmly; what appeared on his face was a silly grin. "I want to thank you for meeting me on such short notice," he said with mock seriousness.

Peg, who'd matched him glass for glass, caught herself in mid-giggle. "Dinner Saturday, dinner Thursday," she countered sternly. "We can't go on like this." After a moment of hesitation she said, "You're smiling a lot tonight, Adam."

Baker heard the underlying message: caution. Always caution. He supposed that he'd single-handedly caused her to develop that trait.

"I feel good," he admitted, "and not just because of the wine. In fact, I have a surprise for you, and a favour to ask."

"Ah. And what would the mightily mysterious doctor be looking for? Surely the magic word secures much."

Baker leaned forward over the table. It was time to take the first step. "You've let one of your employees run the store on Fridays before. Could you arrange for that tomorrow?"

"I suppose so," Peg said, curious.

"Good!" Baker exclaimed, pounding the table with his fist as if he'd just closed a business deal. "Because I've taken the liberty of booking us in at the Sheraton tonight."

"Filthy ulterior motives," Peg said, giggling again.

"And," Baker continued, "we'll leave the hotel tomorrow morning for the cottage. Don't worry about anything. Our bags are already packed and in the trunk of my car."

"A smart man with filthy ulterior motives," Peg mused. "I accept, then."

"A wise decision," Baker said, winking at her. Peg smiled back. Beneath the smile, beneath the cheerfulness of the moment, Baker sensed caution rising to the surface of her thoughts again. He watched, mesmerized, recognizing the changing masks Peg used as she struggled to bring her emotions under control.

Their waiter, an angel of mercy, approached the table with their meals. Peg broke from her self-absorption.

"It sounds wonderful, Adam," she said.

"Wonderful," Baker echoed. "Yes, it does."

The hotel room has surrendered almost completely to darkness. There is yellow light coming from beyond the balcony, beyond the abandoned street

below. It bleeds through the heavy curtains, causing furniture in the room to glow dimly.

Turned facing the balcony doors, Adam Baker lies awake but drifting, waiting for a fast-approaching dream to steal him away into absolute darkness. He smells it in the room, a foul odor rising off the bed sheets, the thick pile rug.

A door slams shut far down the hallway. Baker sits up, panicked. Everything suddenly feels like *that night* again. The wine from dinner has numbed him, and he can't tell if the dream has swallowed him up.

He gets to his feet and pads across the foot of the bed. Something moves in the shadows to his left. Baker whirls around only to see himself as a ghostly white outline in the mirror on the wall. Instantly, he remembers where he is and who he is with. The adrenaline in his system dissipates, sputtering out his soft, deadly hands like sparks from a dying fire. There has never been anyone left for Baker to fear after his dreams have died, but tonight, after seven years, he has found himself.

4. Last night has convinced me to try to get out of this place right away. I dreamt the same nightmare, the same few minutes of time over and over. The visions are so real that I'm worried they're going to spill over into my waking hours. I have a sense of foreboding that's begun to consume me.

I found Barry and Scott this afternoon, and together we worked out a plan for tonight. Hopefully, the farther I get from here, the easier it will be to escape from these nightmarish memories. . . .

Slate grey cloud cover moved in just before sunrise Friday and greeted Peg and Baker when they woke at nine-thirty. By ten forty-five Baker was racing the Volvo down the highway, every turn of the wheels taking him closer to the cottage and farther away from the Campbell-Meech Laboratory.

Baker shuddered. He did every time he thought about his so-called mentors. If Baker hadn't developed a non-mutating cell growth stimulant, Campbell, a drunkard, and Meech, a dullard with monied friends, would've made obscurity their permanent home. Because of Baker, they retired with a fat financial thank-you from the same government agency that then turned around and gave Baker the highest possible military security clearance while whispering in his ear about paying his dues. It had been life, warming up for things to come.

Baker forced those thoughts from his mind and replaced them with his plans for the weekend. As if she could read his mind, Peg reached over, began stroking the back of Baker's neck, and asked, "How long will we be staying?"

Baker shrugged. "Three or four days," he said. "I'm not sure."

It was true. This was the first time in the seven years since Carolyn's

death that he wouldn't spend October 16 at the lab. Baker knew that running away didn't take care of the task waiting for him back there. The important thing was to get through the anniversary date without giving in to tradition. Then, when spring came around again, maybe he would be able to resist the temptation of starting another culture. Maybe, maybe, maybe, he thought, his head spinning with a million scenarios, a million ways out.

They reached the lake just after two o'clock and stopped for supplies at the tiny local grocery store before taking the bumpy road to the cottage. Baker had no sooner pulled into the driveway and opened the front door when the phone in the living room started ringing. He stared at it dumbly from the entranceway, letting it ring four, five, six times. The cottage number was unlisted. He could only think of one person who knew it.

Maybe I should go over and unplug it, he thought. Then another, darker thought came to him. *Maybe I have to pick it up. Maybe I can't escape this.*

He looked out the front door and saw Peg walking up the porch steps with their luggage.

"Adam, aren't you going to answer that?"

Baker ignored her question. "Let me have those," he said, rushing over to take the bags.

"Fine," Peg said, pushing past him. "I'll get it, then." She crossed the room to the coffee table and picked up the receiver. "Hello?" she snapped. Then she covered the mouthpiece with her hand and said to Baker: "It's Conrad Templeman."

Baker set his teeth and took the phone from her.

"Templeman here, Baker. Where the hell have you been? There's been a murder."

It felt to Baker that his spine had just turned to ice. "Where? When?" he asked. "Where are you?"

"I'm on the car phone doing seventy-five down this God-forsaken highway. I've already talked with a couple of your clone staff. They have everyone in their rooms. I should be there in another twenty minutes."

"Wait for me," Baker pleaded. "I'll be there right away."

"You'd better," Templeman said. "Your clones are too damn efficient. When they couldn't reach you anywhere, they knew the rule book well enough to phone both me and Doddard. He moved his plans for an inspection up a month to right now."

This news stunned Baker even further. He mumbled good-bye and hung up. When he turned around, Peg was standing there waiting for news.

"You look terrible, Adam. What's wrong?"

"I have to go," Baker said, instinctively reaching for her.

Peg backed away. "Tell me what's wrong. What is so important that you have to leave?"

Baker drew in his breath. "Someone got killed last night. Otherwise I would stay. I swear I would."

"Do what you have to do," she said. "But come here first."

She pressed against him, let him hug her. Baker felt her closeness working on him like magic, but all he could think about was the workshop. He kissed her once. "I'll phone you when I know more."

Peg broke away and went to the door, held it open for him. "Don't be a stranger," she said without humour.

Baker took the doorknob from her and turned the lock. "I'm sorry," he said quietly, and shut the door behind him.

Except for the corpse lying on one of the examination tables in the medical section and the obtrusive presence of Templeman and his stinking cigars, the workshop was business as usual when Baker walked in. This was not the first violent incident among his research subjects, just the first death.

"I'm getting out of here," Templeman announced shortly after Baker's arrival. "Doddard flies in tomorrow morning, eight o'clock. I want this place in top shape for him. I'll see you then."

Baker escorted Templeman to the workshop's exit, allowed five minutes for him to get off the grounds, then collared a passing guard.

"Lay the corpse out in the operating room for the inspection. And move 12B to an apartment in your section."

"Our section, sir?"

"Don't worry," Baker said grimly. "It'll only be for a couple of days."

5. We tried to escape last night. The way out Barry had claimed to have found turned out to be a set of double doors leading to the boiler room. Once we forced them open, alarms started ringing everywhere.

Furious, Barry turned on Scott and started choking him, screaming that Scott had set us up. I tried to pull Barry away, but he was too strong. When he finished with Scott, he started on me, but a group of staff members came running down the hall and separated us. They took me to my room first, then to a new room where I suppose I'll be staying for a while.

Doctor Baker came just before lunch today. I asked him if I'd be leaving soon. He just nodded his head. He seems to be back to his old unfriendly self, except he looks very tired. The only words he spoke were to ask me for my diary. I gave him the couple of tapes I'd made. There was no mention of the tape recorder so I'll carry on with this journal until I'm out of here.

No usual nightmare last night. Doctor Baker was in my head instead, but by the time I woke up and started thinking about it, the dream was long gone, where I wished I was. Maybe it'll come back and tell me what Doctor Baker thinks I should know. . . .

Baker spent Friday night on the couch in his office, breezed through the inspection Saturday morning — he knew that Doddard was just like Tem-

pleman in his unease around the clones — and left the workshop when all was clear. He arrived home around one-thirty, started a fire in the living room fireplace, and relaxed as best he could in front of it before listening to the tapes.

Baker was disappointed with what he heard, but at the same time couldn't remember what he'd expected to learn from this first attempt at a diary. Perhaps, he reasoned, the project's spinal fluid wasn't carrying memory of the original murder any longer.

It had been proven while Baker was still in university that spinal fluid taken from the base of the brain stem brought with it traces of memory from the donor. The project's fluid had been withdrawn and reinjected seven times now. Although memories of that all-important night should have been the freshest of any at the beginning, Baker feared that those memories were now submerged by the recollection of six other deaths. He'd tried to take care of the problem by altering the programming, but nothing had come of that. If the project did remember, it was as unwilling to investigate this dark area as Baker was to let it go.

He phoned the cottage and caught Peg in the middle of a nap. He explained the events of the night before, detailed the inspection, the paperwork.

"Are you coming up?" she asked when he'd finished.

In the silence that followed, Baker sensed the gap that separated them, sensed the shaky bridge forged over that gap. Peg had built most of that bridge herself, and it was up to him to cross it. But not this time.

"I'm spending the night here. There are some things I have to wrap up. You can expect me early tomorrow afternoon. I'm booking off for a couple of days. If you can swing it, I'd like to stay until Wednesday or so."

"We'll see," Peg said.

They exchanged good-byes and hung up. The phone rang again immediately.

"Hello?"

"Hello." Baker recognized the familiar cold voice. "We flew in this morning. Are things on schedule?"

"Yes," Baker said. "The guard is expecting you at nine tomorrow."

"Good."

Just before the dial tone sounded, Baker realized for one last fleeting second that it was not too late to stop the madness, but the effort needed was beyond his capability. It was so much easier to be swept up in it, swallowed up by it.

He gathered up the tapes. The words on them were not enough; Baker had still not found the man with whom he could fully share his loss. He went to the fireplace and offered the tapes as a sacrifice to the crackling yellow-blue flames.

His stomach knotted, started boiling over. Fire rose to his throat. He ran

to the bathroom and vomited a portion of the sickness that possessed him.

Blinds are down in every room. Curtains are drawn against the bitter fall night outside the windows. In the bedroom, two people lie entangled under soft warm sheets. They are high-school sweethearts ten years removed, each other's true and special lover. And now, for Adam Baker, it is time again to change all of that.

Still resting in the excitement of their lovemaking from an hour before, Adam and Carolyn stir to the sound of floorboards creaking downstairs on the main floor of their home. Adam wakes up. He is not only the Adam Baker of seven years ago; he is also part Adam Baker the madman, destined to walk through this dream every year on the eve of its anniversary.

He hears a drawer slide out, perhaps his desk drawer in the study or one in the china cabinet. Where is Wolfgang, their Doberman? Slowly, he gets out of bed and goes to the door, holding his breath, each step taking a lifetime. Perhaps he is hearing things: the wind, the house settling in for the winter. *Where is that dog?* he thinks.

Adam gets most of the way down the stairs before he realizes the mistake he's made. He is unarmed, helpless. He's left Carolyn alone. Footsteps pad up the hallway toward him. Through the darkness he sees a shadow appear at the end of the hall. Above him he hears Carolyn whisper his name.

"Adam?"

Fire, in the form of two gunshots, fills the room with light, and Wolfgang, finally Wolfgang comes running from the kitchen. The shadow collapses under the dog's teeth as two more shots go off. Carolyn, wet with blood and brains, falls onto Adam's back.

The rest of the dream is a series of staccato images: Adam Baker, in shock, takes tissue samples and draws spinal fluid from both corpses. He knows that his work has progressed far enough that something can be done about this tragedy besides just mourning. The portion of his conscious mind still working doesn't know exactly what he will do, but obeys anyway.

The police, phoned by a neighbor, arrive ten minutes later. One of the officers, a rookie, Adam learns later, takes one look at Carolyn and throws up.

Reporters come, people from the coroner's office take pictures then stuff the bodies into zippered bags, and neighbors try to poke their noses in the front door. The police turn away everybody who shouldn't be there. And then, suddenly, Adam is alone in the house. The fury he will carry with him for seven years starts building. Pure and white-hot, it transports him back to reality. He wakes with a cry, his sheets damp with sweat. He thinks: *How can a man live a dream a hundred times in one night?*

Five sets of footsteps echoed off the tile floors of the workshop's second basement, where all clone generations were performed. This was four more sets than usual. The programming of every clone Baker grew, staff in-

cluded, did not permit access to that area without his direct permission. The entire floor was Baker's private domain, his own little plot in Hell.

The operating room, nestled next to the emergency stairwell, was bright, cold, silent. They took their usual places around the table, each family member dressed in black. There was Carolyn's father, Richard Hodgson, tall and gaunt and even more sickly looking than the year before, a man as completely controlled by his hatred as Baker had once been. A casual remark from Hodgson at Carolyn's funeral about getting his hands on the murderer was what had started Baker thinking about the best way to use the samples he'd collected.

The two sons had simply grown one year older and closer to looking exactly like their father. Carolyn's mother hadn't come this year due to illness. This seemed to add to the family's grim demeanor.

Finally, there was the young niece — or cousin; Baker could never remember which — who'd been coming for four years now. She reminded Baker of Carolyn just enough to unsettle him. He'd never heard her speak, though she always managed to smile during the proceedings, showing sharp yellowed teeth.

They all watched Baker bring the syringe from the counter. He'd been relieved when the drawing of lots held before entering the room had turned up lethal injection as the method of death this year. It was far cleaner than electrocution or progressive amputation with a laser, the family favorite.

Baker paused and forced himself to look down for a moment at the man lying before him. Still in his jumpsuit, the project lay strapped to the table, paralyzed with fear. Baker had used a post-hypnotic suggestion to trigger implanted memories of the six previous gatherings, memories the man had been unable to summon himself, even in the last diary tape.

"Why are you doing this?" the clone asked in a tight voice, looking up at Baker who in turn looked away. None of the Hodgson family knew it, but for the last three years Baker, with his back to their chairs, had done everything with his eyes closed.

Behind him, Richard Hodgson said, "You know why, you bastard."

"But I don't know you," the clone said, again to Baker.

Baker felt himself starting to shake. He gripped the syringe with both hands to steady it.

"Kill him," Hodgson said. His two sons murmured their approval. "Kill the bastard. Remember what he did to her, Adam."

The clone jerked a little; his eyes opened wide. "Adam?" he asked.

Carolyn's last word, Baker thought. He was shaking all over now; his heart raced. *Does he remember? Does he remember?*

"Kill him!"

"Shut up!" Baker roared, and the sound of the words tearing from his lungs transformed his indecision into rage. He plunged the needle to the hilt into the clone's neck and emptied the barrel slowly, performing a brutal job.

No one spoke. There was only the screaming of a dying man, the sound of him struggling against the restraining belts. It was all part of the ritual; to have sedated him would have foiled the purpose of the exercise. There was as little satisfaction in crucifying the unknowing as there was in crucifying the imaginary.

After what seemed to Baker to be forever, the screaming died. He walked the spectators back to their car; they parted with handshakes. He made no mention of his plans for the next time. Exhausted by a restless night and not wanting to start a discussion that could only turn ugly, he would mail old man Hodgson a letter. He would write it as soon as he found the strength. There was plenty of time.

Before he went to clean up the operating room, Baker journeyed to another section of the basement, to a locked room where two seven-foot-long glass cylinders rested on steel mounts. One cylinder, recently emptied, lay awaiting further orders. In the other, in a solution resembling clear liquid honey, floated the perfect 28-year-old figure of Carolyn Baker.

She had been more important than even his work, and now, because of the perverse legacy her death had spawned, she *was* his work. Baker walked over and pressed his forehead to the glass, close to her peaceful face. At one time he would have gone to the monitors at the foot of the tank and rested his hands on the controls, toying with the idea of rousing his sleeping wife. Now there was Peg to consider, dear Peg who he would lose if he didn't stop this madness soon. And the fact remained that, although a perfect copy, the body lying before him wasn't Carolyn just as the man who'd died in the operating room hadn't been her murderer. Both souls had long been swept away. He understood that even one minute separated forever.

"It's finished now," he promised her, wrapping his arms around the warm glass. "It's all over now."

1. Doctor Baker came to my room this afternoon to give me a tape recorder. . . .



THE DEFILING
by Bridget McKenna
art: Brad W. Foster



Bridget McKenna lives in the California gold country, where she writes computer game scenarios for a large software publisher. Among her other interests are keeping koi and reading about the Civil War.

The author's stories have appeared in Writers of the Future, Pulphouse: The Hardback Magazine of Dangerous Fiction, and Isaac Asimov's Science Fiction Magazine. This is her first story sale to Amazing® Stories.

We came down from the plateau, past the places of occasional rain, and the desert was upon us without warning, red as blood.

There were three of us that year, poets and pilgrims crossing the empty places to the city under the stone, and we were nearer our journey's end than its beginning when we rode down the lip of ruby sand and paused at the bottom to consider the arid prospect that stretched before us. We would cut across this southeastern corner, skirting most of the great central desert that each year devours a larger portion of the fertile land around it like some greedy beast. When we rested at last, it would be under the great weight of the sky-stone that shelters our spirits and hears our vows.

I represented the Western Poethouse as I have done every seventh year of my matriarchy, to oversee the giving and taking of sacred vows and the assigning of poets to the patrons for whom they had been chosen. In front of me rode Dionais, who would be leaving us when we reached Novarabi to become a poet in a great house, and behind me rode Amalthea.

What can I say of Amalthea? Her very existence was a poem. Her inner beauty so matched her outer perfection that every action embodied the perfect balance of form and meaning for which the true poet must strive all her days. Her mother, realizing what a treasure she had created all unknowing, brought Amalthea to our door when she was barely old enough to walk, that she might not become tainted by the world outside our walls. I was not young when she came, and less so when I rode before her on that journey thirteen years later, but her presence was all the youth I required. Faithful Dionais was my right hand, but Amalthea was my heart.

We could have traveled in luxury, using the vast resources of our Poethouse, but there was a purpose to this journey taken so austere. A woman who has seen the beauty of green growing things, of blue waters as far as she can see, might perceive only ugliness everywhere she looked in this place, might see harshness in the colors, hear emptiness in the long silences, but if she will stay a while, she will discover beauty where she never thought to find it, will learn to listen as the desert gives her its poems of scorpions and razorglass. So it had been for me since my first crossing, and there were deserts in my poems now, and hot winds that never blew through the sheltered walls of the Poethouse or the marble porticoes of patrons' villas.

There was no speaking or making of poems as we rode through the day, our hoods pulled up to ward off the sun as it climbed higher in the sky. The shifting sun altered the color of the sky, the sand, and the twisted rocks by degrees as it fell toward the west, and as we watched, its shadows brought different planes and faces into relief, changing the shapes and meanings of everything. A constant teasing wind sucked at the moisture in our mouths and noses, as though to make us as dry as it. The dunes shifted under its pressure like slow red waves. The heat became a part of us.

At length we stopped to take some water. Dionais dismounted and took a waterskin from the packhorse. "Will we be long in this place, Mother Be-

lan?" she asked as she held the skin up for me.

"This day and another before we see a tree, my child, and at that it won't be very green."

Behind us, Amalthea sighed.

I spoke without turning. "Are you troubled?"

"Yes. This place troubles me."

"One place must become like any other to the poet," Dionais said. "Some-day you'll be sent to live for seven years in a place you never saw. And after that, another strange place, and another." Her voice attempted the confidence of womanhood, but I could hear the uncertainty in it as surely as I heard the skittering of a tiny lizard down a sand dune as it ran for the shade of a spiny bush.

"It is a hard place, Daughter, and if we were here longer, it would test us. We'll have but a taste of it this journey."

"There is death here, Mother Belan," Amalthea persisted, and there was no fear in her voice, only the kind of calm knowing that marked most of her utterances.

But Dionais had not my sense of things. "Perhaps you had better think again, Sister, before the taking of vows. The spirit of Esta would not look kindly on a poet who runs in fright from each new experience."

"Death is not a stranger in any place," I interrupted. "We'll move on now."

It was another hour before we first heard the sound. It might have been the cry of a small animal, but we knew at once that it was not. "It's over there!" Amalthea cried, and urged her horse ahead of us over the next ridge. When we crested the ridge, she had dismounted and was running toward a shape on the sand.

"Amalthea!" I cried. She continued to run, sliding down the incline with each step. Her hood had fallen back, revealing coppery poet-locks in the sun. I raised myself up in my stirrups, brought my voice to full power. "Stop!"

She halted, quivering. I eased my mount down until I was beside her. "Daughter, I have never seen you like this. What is the matter?"

"Mother, there is a child over there." She pointed at the small form a few lengths away.

"So it appears. And yet much must be considered, even of so obvious a thing."

"A poet's objectivity is her most precious possession, after her voice," Dionais observed, handing Amalthea the reins of her forgotten mount. She rode on ahead of us and stopped beside the small figure, which was rolling slowly from side to side, making high-pitched, breathless sounds.

Amalthea walked toward them, the hem of her white robes beginning to stain the red of the desert, and I followed.

"It's a boy-child, about two years old," said Dionais.

"He's dying," said Amalthea, looking away from Dionais to me.

I could see the truth in this, for the sun and heat had dealt harshly with him. His tongue had swollen to fill his mouth, and red sand clung to the shriveled blisters that covered him everywhere his rags did not. His crying was long done, I supposed, with no one there to hear, and he was too weakened to crawl from this spot. He would die soon, and as I glanced at Amalthea's face, I hoped we would be far away when it happened.

"Probably the son of a laborer, abandoned because he was too weak to survive the crossing," Dionais continued. "If food and water were scarce, his family may have decided to conserve by leaving him here."

"Perhaps we could save him," Amalthea proposed, moving closer and looking down at the child, who had stopped moving and was looking up at her, its eyes beginning to dull from the unrelenting dryness of the wind.

Dionais turned in her saddle and regarded Amalthea. "Why?" She looked at me, then back at her sister-poet. "The world flows through me, yet I am not a part. I am a maker of poems. I will take from the world only that with which I make my poems, and I will leave no mark upon the world but the mark of my poems."

"Accurately quoted, Daughter."

"It's right there in the Tenets of Esta. A poet is an observer, not a changer of things — not a shaper of fate. Here is a thing we may observe, and poems may come of it." She dismounted and approached the child, careful not to touch. It followed her with its eyes.

Amalthea looked up at me. "Is a poet not human, Mother? And this child, what is he?"

"A man-child, and the child of laborers. His people are born like beasts, and are as plentiful. You have seen little of life, and it is not good that you saw this, but to interfere in it would bring great tragedy."

"Greater than this?"

Behind us Dionais gathered her breath, preparing her voice for a poem. I took a crystal from my sleeve and broke the seal. The poet's mind forgets little, but the crystal forgets nothing.

Dionais spoke:

"What vast, empty place
brings these four souls together —
actors, playing parts?"

And Amalthea:

"What empty heart conceives us
as puppets, knowing us not?"

Dionais had used the form Gathering In. Had Amalthea linked another verse of the same form, it could have begun a long, twisting, branching poem like a vast passageway with myriad rooms, a twist that would become a braid as I added my verses into theirs. But Amalthea's response was in the form Barring the Door, and not only opposed Dionais's theme, as was

proper, but actually turned it back upon itself, changing its intended meaning to its opposite. It was an attack — a challenge.

But Dionais could not reply. The next verse must be Amalthea's:

"Look! Are these three doves,
granting blessings, or only
ravens dressed in white?

At Novarabi the sky is stone,
and there are no stars."

By using the form Turning a Corner, Amalthea had taken the portion for Dionais's response, had she chosen that strategy. Now Dionais must begin anew, though she had the choice of linking to either part of Amalthea's verse. The more subtle the link, the more pleasing and powerful the poem. The child had grown quiet — listening, or perhaps only closer to death. I was relieved not to hear it.

The sun had begun to set rapidly, and I knew we would have to make camp here rather than move on in the dark. We would do without a fire this night — there was precious little to burn.

Dionais spoke:

"See now the sun retreats
behind a twisted hill, turning,
gathering her hood.
Alone, serene, ascendant —
the white-hot moon contemplates
even the beauty of death."

She was taking back the offensive, but her use of the form Walking Through betrayed her lack of confidence. Using more words to say more does not require a poet. Amalthea dropped to her knees beside the child. My heart froze. She spoke low into the deepening light, but her voice was the only sound in that vast redness:

"Garnet sands —
blood of sacrifice.
Heart's jewels."

The form, Cutting. It implied an end to this making if Dionais could not turn it to advantage with a better verse. I spoke into the silence, lest it grow too long. "We will stay here the night. Amalthea, help me dismount."

Dionais was too distracted to notice that I had not asked her, and my heart would not beat properly until I had removed Amalthea from danger of touching the boy. "Let me lean on you, child, while I walk the stiffness from these old legs."

"You are not old, Mother." She helped support me as I walked, her touch a gentler warmth against the day's heat. "You could never be old to me."

"I was old before you were young," I chided. "And even I am not as old as the Tenets of Esta. Every woman in every Poethouse has sworn to live by those tenets, as will you when we reach Novarabi. They are more than

words. They are the reason for our existence."

"I can't remember when I didn't know the tenets," Amalthea said, "though I supposed they were about the preserving of life, and not the wasting. Perhaps I mistook the words for the meaning."

"There is history as well as meaning in them. Now I will tell you something you would not hear until we attended the taking of vows: Once there were no poets, only tellers. There are tellers still, but they bring no beauty to the world. To us belongs the making of beauty from words, but in all the ages of the poets there have been times when we were hated, feared by those in power. In Esta's time we were hounded nearly out of existence."

"Why?"

"Need I tell you the strength of words or the power of the voice? Even now your sister Dionais wavers in her previous conviction, and you, however talented, are but a novice. Imagine a master poet swaying thousands with only her voice and her verses — sowing unrest, toppling states."

A bright curl escaped her hood as she shook her head. "No poet would do such a thing. It's unthinkable."

"Unthinkable, yes. Because of the tenets. Our adherence to them, as others cling to gods or treasures, is the reason we're allowed to live." I listened to the slight change in her breathing as she comprehended my words. "If you were to defy these laws of our being, even now before you are sworn, you would be turned away from the order, stripped of everything you possess, driven out into the world. There can be no other way. Did you think the stories of outcast poets you tell one another late at night in the sleeping halls are made up to frighten fainthearted children?"

I drew her into my arms and held her close, trying to soften the harshness of my words. "You are a good daughter and someday you will be a great poet. You will bring us honor and become matriarch in my stead when your time in the world is done. Novices for a hundred generations will imitate your style until they find their own. A voice such as yours comes to a Poethouse perhaps once in ten lifetimes. I thank all the matriarchs you came during mine."

We turned and walked back toward Dionais, who was busying herself with bedrolls and waterskins some distance from the child, from whom came only the small sighing of its breath.

The sky had gone gold-green at the horizon, and an ice-blue evening star grew brighter in the west. The wind had died. Dionais handed me a waterskin. I drank and held it out for Amalthea, who turned away.

"Drink, Daughter. You'll become ill."

"Mother, I cannot." She sat looking toward the small form, which had grown very still.

Dionais laid a comforting hand on Amalthea's arm. "You are very young, Sister, for the taking of vows. When you are older, perhaps you will understand."

"I understand now," she replied softly, and sat there long after the sky went black and full of stars, and Dionais and I slept against a sun-warmed dune. Even asleep, I heard her rise.

Her feet whispered on the sand as she crossed the distance between us and the boy, and the heaviness of every other step was the weight of a waterskin in the crook of her arm. I prayed not to hear, not to know, but the spirit of Esta was deaf to me. I heard the cool, flat sound of splashing water, the settling of a cloak, the fall of tears and the sand drinking them. A sorrow came to visit me then — a sorrow that has never left me, never fails to wake me in the night, greet me in the morning, sit by me like some dark companion through the day.

"I hear you listening, Mother," Amalthea whispered. "Do what you must do."

We rose before the sun, while the night chill was still on the air. Amalthea sat as before and might never have moved, save that her cloak covered the small form in the distance.

Dionais's eyes went wide at the sight, and I gestured to her to saddle my horse. She pulled her hood forward to cover her confusion and hurried away.

I went to stand behind my dearest daughter.

"The child is dead," she told me, and her voice was almost perfect in its control. "I stayed with him, but I couldn't save him."

"I know." It was all I could say and hope to keep my own voice.

"There can be no other way." She spoke my words back to me, and though I might rip out my throat from remorse, I could not take them back.

"Not for us."

"I know."

In two days we reached the edge of the great desert, and though no one spoke of it, the image never left my mind of Amalthea stripped of her robes, shorn of her locks, the fresh red scar where they would take her voice away forever. At the easternmost edge of the basin she reined in and looked back over the way we had come. I knew she would speak, but I did not break a crystal. These words would be for my heart alone.

"How little stirs within
the arid emptiness of
this desert of the heart."

She tossed back her hood, met my eyes, and spoke the last of her poem:

"The Road around this wilderness
is shorter than the way through."

Far ahead, Dionais rose in her stirrups and pointed out the black stones of Novarabi.

STRESS, SURVIVAL, AND SELFISH GENES

SCIENCE

by Stephen L. Gillett

Dr. Stephen L. Gillett is a research associate at the University of Nevada's Mackay School of Mines. His previous popular science articles in Amazing® Stories include "The Scientific Literature" (March 1985), "The Cambrian Explosion" (May 1985), and "Weird LAWKI" (May 1987).

Sweeps of sagebrush, lapping up to tall mountain ranges sprinkled with small trees — pinyon pine, juniper — on their lower slopes: the scene is familiar all across the West. The trees (well, we call them trees here in Nevada; they're large bushes, though, to folks from the East) start at a level up on the mountains somewhere. We have a *lower* timberline out here in the arid lands, set by the point at which there is enough moisture to support a tree. Lower down, there's less rainfall — and all you get is sagebrush or other xeric (dry-tolerant) species.

Yet, Mother Nature never draws sharp lines. If you look at this lower timberline in detail, it's really very fuzzy. You find the odd tree, or even an entire grove, way low, nestled among the sagebrush. Some are scattered along dry watercourses, but others are just out there alone.

Whether by good luck or good genes, they extend the environmental range to which their species is adapted.

At the other timberline, the "traditional" one up high, above which it's too cold for trees to grow, you see the same sort of thing. (Yes, many mountains in Nevada are plenty tall enough to be above timberline!) The "line" is similarly fuzzy. Here and there, you can find pines and spruce dwarfed to ground cover, creeping along like vines among frost-shattered rock, hundreds of feet above the continuous forest;

what a botanist calls "krummholz," German for "crooked forest."

And everywhere we look, we find a similar vagueness at the margins of an environment. It's a general characteristic of living things. At the seashore, for example, some oysters or barnacles will be grimly perched all alone, inches or even feet above their compatriots at the water line, eking out a precarious existence from the rare spray that wets them. It's a truism that "living things are adapted to their environment." But their "environment" is a fuzzy thing, with no hard and fast edges. Sunlight, moisture, temperature, and all the things that determine where a species can live and where it can't vary in a continuous range. And if a species is adapted to a certain average set of conditions, it must eventually find itself maladapted *somewhere*, as those conditions grade into something different. At some point, at some level of dryness, or heat, or insect population, or whatever, the environment will become marginal for that species.

Now consider a population, an interbreeding set of living things. They could be pinyon pines or bobcats or oysters or mangroves or sagebrush; whatever. Any such population will have a range of characteristics: some will be larger, some smaller; some may be more tolerant to dry conditions, others less so; some may resist certain

diseases better, but grow more slowly, and others conversely; some may put up with heat better, others with cold. Any species has a vast range of such characteristics, both obvious and not so obvious, and a population of those species will show a range in each characteristic. The amount of such variation is called the *diversity* of the population, and it's truly a measure of the genetic diversity among the individuals.

It turns out that the marginal environments have higher diversity. Optimal environments — the tree growing happily midway between the dry timberline below and the cold timberline above; the oyster right at the water's edge, washed inevitably with every wave; the bobcat living not too far north nor too far south, so that temperatures are never too extreme — those environments have low diversity.

Why is this? Because an individual thriving in the average conditions for which it is *already* adapted has no incentive to change. *Any* variation from the norm is a disadvantage, and any descendants with such variations will be strongly selected against. They just won't survive as well. As time goes on, therefore, the population as a whole becomes more fine-tuned to a narrow set of conditions.

At the edge of the environment, though, where conditions grade imperceptibly into something different, it's a different story: diversity is much higher. Variation is selected for; or at least, it's not selected against so strongly.

An exquisite example comes from studies of grasses. In an average mature lawn or meadow, the genetic diversity is small indeed. In fact, most of the plants turn out to be propagated from just a few individuals, as the progeny of a few specially favored

individuals crowded out all competition. (Such descendants of a common ancestor are a *clade*.) Moreover, since grasses can propagate just by sending out runners, instead of seeds, the lack of diversity becomes especially exaggerated.

Around a smelter, however, where the grasses contended with heavy-metal pollution in the soil, a study found that diversity thrived. No *individuals* thrived; all plants were sickly and obviously had a hard time making a living, but a lot more clades existed. Such an environment is much more tolerant of diversity; any variation could hardly be much worse, and it might even be better.

Such populations, living precariously at the margins of their environment, are "stressed" populations, and they are the reservoirs of evolution. They're a bank of diversity that can be — and *will* be — drawn on when conditions change.

To see how, we can look at the fossil record of life on Earth. A classic problem of the fossil record is that it appears to record very long intervals when living things didn't change much at all. These intervals of *stasis* will then be followed by abrupt change, at least at the scale of the fossil record; all of a sudden a very different set of critters predominates. There's not much direct evidence of gradual change.

Part of this jumpiness comes about because the geologic record is a fitful recorder, which is turned off much more than it's turned on. It's as though you tried to reconstruct the Ninth Symphony by listening to a second or so of music every minute.

Still, all the discontinuities in the fossil record do not reflect the inaccuracies of the geologic recording processes. Large changes in the fossil

record *do* occur relatively quickly, much more quickly at some times than others.

Now, you've probably heard a lot in recent years about "selfish genes." The unit of survival is a gene, just making copies of itself. The more copies it makes, the better it survives; that's what *survive* means, at the level of a gene. It's purely mechanical. The population — a group of interbreeding life forms — does not evolve. It's the genes that evolve, as those which are better at making copies of themselves prevail.

This is right, but wrong.

Look at a newspaper photo sometime. It's fuzzy, grainy, but perfectly recognizable. Now look at the same photo through a magnifying glass. The picture disappears, replaced by a field of black dots of varying sizes.

Is it a picture, or is it just a bunch of dots?

Are the genes evolving, or are the populations?

In both cases, the answer depends on the scale you're looking at.

Populations *do* change over time — they exhibit a range of characteristics. To be sure, each characteristic depends on a gene, or a small group of genes. And, to be sure, pressures on the population are expressed by the survival or not-survival of selfish genes. Nonetheless, the distribution of characteristics that the population exhibits changes as a result of pressures the population feels. At that level of description, you don't need to worry about "genes" at all.

The micro-behavior of selfish genes does affect the patterns of macro-evolution, though. This is another example of low-level behavior having high-level effects, the same, say, that the air pressure in a tire results, at a very low level, from the collisions of

billions upon billions of air molecules with the tire walls. Genes have no foresight; what works now *works*, even if it will lead to inevitable disaster in another few hundred generations. This leads to low-diversity populations, and to overspecialization.

As Poul Anderson once remarked, if we look at the evolutionary record anthropomorphically, it consists of the same blunders repeated over and over. Species after species became overspecialized, exquisitely adapted to a narrow range of conditions, only to become extinct when conditions changed.

So, the stressed populations are highly important because they preserve diversity. When conditions change, these populations, scrabbling for a living in the marginal circumstances at the edge of their environment, are the nuclei of new species.

As I said, they're the reservoirs of evolution.

Now we can understand the episodic nature of the fossil record. When the environment changes, most of those well-adapted, low-diversity populations just can't cope. They become extinct. But isolated, stressed populations have the genetic diversity to adapt to the changes. Or at least they're more likely to be able to adapt. With competition eliminated, they can undergo rapid evolution to adapt to the altered conditions. The populations will also *speciate*; that is, some parts of the population change in one way, some change in another, others in yet a third, and before too many generations go by there are several new species where there had just been one. This formation of a number of new species is called *adaptive radiation*. Thus, related species started as a clade that underwent diversification during an adaptive radiation.

We also see why so rarely are “missing links” preserved in the fossil record. You’d have to be real lucky indeed to preserve a record of the isolated population undergoing adaptive radiation. After all, it’s a *small* population, and it covers a small area.

This view of the evolutionary record, popularized by the paleontologists Niles Eldridge and Stephen Jay Gould, is called *punctuated equilibria*. The long intervals of stasis are the “equilibria,” and the intervals of rapid change, when small, marginal populations are able to evolve rapidly to take advantage of changed conditions, are the “punctuations.”

(I should emphasize that the adaptive radiation is “rapid” only in a geologic sense! The population still changes gradually, over the course of many generations. It’s not a matter of instantaneous change, as is sometimes misunderstood. It’s instead a matter of faster change than usually happens in geologic time.)

Here’s an ancient example. The shells of critters called trilobites, very distant relatives of crabs and shrimps, are reasonably common in limestones from the Late Cambrian period, about 500 million years ago. Throughout North America, as you go up the stack of limestone layers to younger and younger strata, the trilobites don’t change much. Generally. At several places, though, they all vanish abruptly. We’re not sure of the cause of this abrupt extinction; possibly colder water from the ocean depths invaded the warm, shallow seas where the trilobites lived. Anyway, after the abrupt die-off you see a rapid re-speciation, an adaptive radiation from stressed populations of deeper water faunas. And in much less than a million years, a new set of trilobites had evolved, generally similar to the pre-

vious one.

The whole scenario happened four or five times throughout the Late Cambrian, a time spanning perhaps 30 to 40 million years.

For more modern examples, everyone’s heard of the Galapagos Islands and their strange fauna, which so profoundly impressed Charles Darwin. Here, isolated populations radiated into many different ecologic niches on a very rapid time scale geologically.

But we have examples just as good in the Great Basin of the western United States: “Island Mountains.” The Great Basin (something of a misnomer) is ribbed with dozens of long, parallel mountain ranges, and many of the mountains reach high enough to claw some rain out of the depleted clouds moving eastward from the Pacific. Thus, the mountain ranges are outliers of more humid climate; islands of forest in a sea of sagebrush, isolated from one another just as surely as though surrounded by miles of salt water. There are even species of plants and small fishes unique to a few mountain ranges, or even to a specific mountain range.

It works the other way, too; if you have environments coalesce, you have a loss of diversity. In fact, this is a major cause of extinctions. The largest extinction recorded in the geologic record occurred about 250 million years ago, at the boundary between the Permian and Triassic Periods — which was also the boundary between the Paleozoic and Mesozoic Eras. Over 95% of then-living species became extinct.

The causes of this great extinction are still disputed, but it was probably an ecologic crisis: it coincided with the coalescence of almost all continental landmasses to form the supercontinent Pangea (Greek, “all earth”). So, all

land species were brought together to compete over much-diminished real estate. (The interior of the megacontinent was a much more hostile environment than any that exists today. A largely lifeless steppe, with temperatures soaring to over 50° C (122° F) during the summer, plummeting to far below zero in winter; it would make modern Siberia look like Hawaii.)

At the same time, sea level dropped to an extraordinarily low level (similar to the level at present). All the warm, shallow, and extremely productive seas that had lapped across the continents drained away. Suddenly, not only did formerly isolated shallow-water species find themselves competing for the first time, they also found themselves competing for a drastically shrunken environment. And extinctions were legion. (In fact, the drop in sea level, with the greatly increased land area, probably gave the evolutionary boost to reptiles over amphibians. Reptiles don't need open water to reproduce.)

For a more recent example, several million years ago a land bridge was formed between North and South America, the present Central America. Till this point, South America had been like Australia, another fragment of the ancient supercontinent of Gondwanaland, standing in splendid isolation for tens of millions of years. And also like Australia, a unique, indigenous fauna of marsupial mammals had evolved in this isolation. But with the formation of the land bridge,

placental mammals from North America could invade, and they did. The unique South American faunas proved to be no match for the invaders, and they were annihilated completely. Stephen Jay Gould has called this extinction "the most devastating biological tragedy of recent times." (The exchange wasn't completely one-sided: the opossum went the other way, to establish itself in North America. But it's a small marsupial. All the big ones became extinct.)

People are great diversity destroyers as well. As we've spread across the planet, our activities have greatly accelerated extinctions of other species, mostly due to habitat destruction: the clearing for farms, the draining of wetlands, the conversion of open land into suburb. Such destruction is not just due to "civilized" peoples either. For example, the invasion of the Americas by paleo-Indians, about 11,000 years ago, probably caused the extinction of the large Ice-Age animals: the ground sloth, the mammoths, the giant buffalo, the horse. The paleo-Indians simply over-hunted them; and unused to human hunters, with their fire drives and their cooperative strategies, the animals fell by the thousands. Then, with no prey, the large carnivores — the saber-toothed tiger, the dire wolf — died out, too.

In diversity there is survival. If we expect to survive, we're going to have to learn that lesson, too — before we learn it the hard way.

RENAISSANCE MANNA

by Arlan Andrews
art: Daniel R. Horne



Dr. Andrews once worked as a mechanical engineering group leader at AT&T Bell Laboratories. He now lives in New Mexico.

His works have appeared in Analog, Isaac Asimov's Science Fiction Magazine, Omni, and, of course, Amazing® Stories ("Rite of Privacy," January 1989; "A Visit to the Nanodentist," May 1989).

"It could be sabotage," Dr. Panlener Spoon said, viewing the thin colored lines of the electronic circuit drawing on the large computer screen. "This design should function properly." He tapped a stubby forefinger against the terminal's touch screen control surface and watched the peripatetic lines dissolve and regenerate. "Trouble brews."

Dr. Spoon's thick white eyebrows drew together in a sharp V, and his round bearded face took on an incongruously serious aura that prevented one from taking him for a department-store Santa. His thousand-dollar suit was definitely *not* bright red.

"I don't understand, Dr. Spoon," objected Horace Noll, the tall, gangly engineer who owned the company. "We already know that the design should work. We already know that it doesn't! Now, please tell us something we don't know. That's what we're paying you for!"

Spoon wrinkled his face in disgust, started to respond but remained quiet. Instead, he arose from the comfortable terminal operator's chair and scanned the pristine engineering offices once more, ignoring Noll and the gaggle of young assistants standing round him. *Standard bullpen*, he thought as he peered over the edge of the free-standing acoustically insulated modular wall units. *But very quiet, well appointed, well lit. Very healthy for the designers.* He noted the various posters above desks, proclaiming this engineer as an ultrabicyclist, that one as a science-fiction fan, many as joggers and sports enthusiasts. He smiled ironically. *Everything's very nice. Just too bad their designs don't work!*

"Tell me once again when and how the trouble started." Spoon often asked his clients to repeat their estimate of their troubles, and just as often ignored them as they rambled on. On this occasion he was merely bluffing, using the time to collect his thoughts. He already knew the problem: Noll's ultratech company, RealiTekk, one of the bright and rising stars of the new Developing Intelligence industry, noted for its incredible nanocircuit inventions, had started experiencing disasters sometime within the last month. None of their new inventions worked! Integrated nanocircuitry, "standard mundane stuff," Noll assured him, just would not perform the functions they were supposed to do. Oh sure, the designers told him, electrons flowed, the invisibly small nanomachines did their drunken dances among the molecules — but the outputs, the structured functions that were supposed to occur, didn't! Instead, they were random, unpredictable. Chaotic.

Spoon himself had reviewed the records, watched the videotapes — not one of the fifteen integrated circuit designs, not one of the dozen nearly incomprehensible nanomachines, functioned. Not in the test lab, not in demo models, not even on the engineer's bench! If word of this disaster leaked, not only would RealiTekk's stock drop, but the ripple effect on adjacent small high-tech businesses might well diminish the growing economic fortunes of Central Indiana's Silicon County. *I think the appellation 'Silicorn Valley' more appropriate myself*, Spoon thought, looking out the lab window over

square miles of tasseled corn. *Except, how can you have a valley without any hills?*

Spoon held up his palm signaling quiet. "Yes, I know, Mr. Noll. Nothing works anymore. And you wish me to find out why, perhaps remedy it if possible." Nods all around. "May I have some time alone with your latest D.I. system?" He paused. "And a cup of your best coffee?" Noll started at this last request. His body language grew downright hostile as Spoon produced a blackened briar pipe and began stoking it, trying to encourage the beginnings of a flame.

One of Noll's entourage of bright-eyed young blonds pointed toward the NO SMOKING sign above the computer terminal. "Dr. Spoon," Noll said, "Geoffrey here correctly points out that we do not allow sm—" He stopped short under Spoon's retaliatory glare. "Of course, Dr. Spoon, you may do whatever you wish. We will merely increase the ionization flow in this cubicle to reduce smoke hazards to our equipment." He waved the surprised young man away.

"And I apologize for my testiness, Spoon. I've been under extreme pressure to complete these delayed projects. My payroll, the future of the company, rests on success. And soon! I hired you because of your excellent reputation in solving, er, unusual matters of utmost importance.

"Crystal, would you please instruct Dr. Spoon in Max's user protocols?"

A technician appeared, nodding, and slipped a one-inch cube of yellow plastic into a bright blue shoebox-sized protrusion under the computer screen. "That's Max, Dr. Spoon, have fun," she said with a wink.

One of the young men returned with a pot of coffee. Spoon didn't like the odor; the liquid itself tasted even worse — instant, decaffeinated! He jotted down a brand name on a notepad and asked the engineer to fetch him some real coffee from the nearby shopping mall. Noll sighed and nodded assent.

Spoon turned his attention to the on-screen tutorial and soon found himself completely fascinated by the three-dimentional holo display that floated in front of his face.

The user's program easily led him through the simple mechanisms of making holo-drawings and of producing the computer instructions that told the nanofabricators how to build the final products. RealiTekk had made billions with this simple system. Why wasn't it working anymore? Spoon called up the firm's historical records. He learned how Horace Noll had started the company literally in his garage in nearby Bloomington, building his own equipment, making his own drawings, farming out the mechanical work to the new network of small-job shops that cropped up in Silicon County.

Late that evening, he had a roboclerk fetch the original copies of Noll's crude drawings, the basis of RealiTekk's revolutionary nanocircuit mechanisms. How much more efficient these new computers! No hand labor, no stacks and stacks of old stained paper drawings!

Spoon worked on into the night, unaware that he was alone, stopping only occasionally for a sip of the fine Colombian coffee the reluctant young man had finally delivered to him long after standard quitting time.

By morning, he had the solution.

Panlener Spoon leaned way back in the swivel chair, puffing great gray clouds of sweet-smelling pipe smoke. In his left hand a cup of hot coffee added water vapor and its own calm odor to the ambience of the cubicle. Circular stains on the computer desk evidenced Spoon's coffee-cupping. The floor of the cubicle was a mess — covered with drawings: folded and unfolded engineering drawings several feet wide, foot-thick rolls of frayed-edge paper documents jammed under the computer desk, corners of the blueprints sticking out from drawers.

Horace Noll and three young technical types crowded around Spoon, dodging his bulk as he swiveled to and fro, at the same time trying to avoid stepping on the scattered documents. The mess reminded Horace Noll of the garage days of his company. He smiled at the memory.

"So, Dr. Spoon, have you saved my company?" Noll asked. "Was there — sabotage?" He waved a hand at the chaotic sprawl of papers around Spoon.

Eyes twinkling, Spoon shook his head. "Make yourselves places to sit, Noll. Here, move some of these drawings away." Over the crackle and crunch of blueprint paper Spoon snapped his fingers, and another young man rolled a serving cart into the room and started pouring coffee for everyone. Spoon noted that only Noll took the proffered cup. *Just as I thought!*

"You're all quite healthy here, aren't you, Noll?" Spoon said. "I've seen the posters on the walls, the mail messages on the computer terminals: you've got jogging clubs, 'stop smoking' classes, a company gym, the whole works."

The tall man nodded. "Why, yes. Our young employees thrive on exercise and proper diet, and we encourage that. What's the connection, Spoon? You're not saying that health gets in the way of work, are you?" The young RealiTekk designers laughed at the absurdity.

Spoon took another puff from his recalcitrant pipe, spewing more smoke into the crowded space. The young people cringed at this new assault on their environment. "Not at all, Noll. Now look at this." He spread out a ragged yellowed drawing of a nanocircuit layout. "Look familiar?"

Noll nodded, nostalgia flooding in. "RealiTekk's very first product, the nano-based cocaine immunization synthesizer," he said quietly, caressing the stained yellowed surface. "My own drawing. Five years ago. Printed out on my old two-dimensional Macintosh system." Noll sighed and then sipped the black coffee. His eyes pleaded with the bearded fat man. "We're designing even more important products than that now, Spoon, if we can get them to work!"

Spoon nodded. "Ever hear of the Renaissance, Noll? You others?" The

men and woman nodded yes, but obviously puzzled at the question. "Ever wonder how and why it came about?"

The young blond, Geoffrey, raised a finger and began talking. "Sure, Professor Spoon. After the Crusades, the Europeans brought back all kinds of Arab knowledge — mathematics, science, philosophy." He beamed. "Even records of ancient Greek science. That brought on the so-called 'renewal.' Except that it was already old hat to the Arabs."

"Thank you, Geoffrey al Marik, for that historical perspective. You're quite correct that the Arab documents provided one basis for the Renaissance. But why at that particular time? Why didn't a gradual flow of Arab knowledge make just a gradual improvement in Europe? Why was there a cultural shock wave?" When no one responded, he answered his own question.

Spoon continued his discourse. "A goatherd's secret-ingredient discovery conquered the Arabs in the thirteenth century, accounting for the flowering of Arabic civilization. By the seventeenth century that knowledge spread to Europe, particularly Italy, heralding the acceleration of intellectual upheaval in the West." In answer to the astonished countenances of his listeners, Spoon held up his cup of dark brew.

"Lady and gentlemen, I give you the secret catalyst that sparked the Renaissance — coffee!"

Noll stood up and placed his coffee cup down on the old yellow drawing, splashing some on the paper. "Now listen, Spoon, I know your reputation, but this is patently stupid. You may leave now: I've got a company to save, and you're talking idiocy. Coffee, indeed!"

With great effort and creaking joints, Dr. Panlener Spoon hoisted himself from the chair where he'd spent the last fourteen hours. "Coffee is just part of the problem, Noll. Now just wipe up that coffee from your drawing, sit down, and hear me out.

"As a true professional," he continued, "I will collect my considerable fee only if I produce." Noll cleaned up his coffee spill and rolled the drawing up. He sat down again, chastised but attentive. "As I was about to say, I believe the proliferation of coffeehouses throughout Europe in the 1600s stimulated" — he smiled at the pun — "the intellectual fervor and creative genius of Europeans and so brought about cultural and technological advances that the Arabs had enjoyed for centuries." Al Marik was smiling and nodding vigorously. "I hesitate to say that similar caffeine compounds in certain Oriental teas may have also stimulated the Chinese civilization, but some five thousand years before that." Al Marik frowned as Crystal, the young Oriental technician, laughed aloud.

Al Marik spoke up, defensive and irritated. "And all of us drink decaffeinated coffee, if we drink any at all, so we're no good at creating workable designs? Is that it? I don't believe that's true, Dr. Spoon. That's crazy!" Noll and the rest of the RealiTekk people nodded agreement.

"Noll," Spoon spoke directly to the owner, "you hired me for my — unusual — background, no? Well, let me finish the puzzle for you, tell you where all of this comes together." Noll and his people leaned closer to hear the fat man's defense of his wild theory.

Spoon asked, "Have you ever heard of the Hieronymous machine?"

Hours later, in RealiTekk's large warehouse, Horace Noll came over to shake hands with Panlener Spoon. Forty-five engineers, drafting designers, software developers, and production workers arose from the paper-littered floor and applauded. Dr. Spoon took it all in stride.

"Incredible, Spoon, just incredible. All of our new prototypes are working — the revivification nanoes, the picocircuit modules. We'll be restarting the fabrication facilities again this afternoon, recalling all of our production workers. Just fantastic!"

"Only a person with your unique background could have solved my problem." He waved an outstretched arm at the happy faces in the crowd of cheering RealiTekk professionals. All of them held empty coffee cups in a salute to Spoon and Noll. Around the warehouse floor, dozens of pots of coffee punctuated the stacks of hastily drawn flow charts, circuit designs, nano-mechanism assemblies. Partly empty coffee cups sat with dark meniscuses around their bottoms, staining the large blueprint documents. "Who would have thought, Spoon? Other than you, who would have thought?"

While Noll went around patting his employees on the back and sharing the triumph of the moment, Geoffrey al Marik came up to shake Spoon's hand. "I've got to admit, Dr. Spoon, that I didn't believe your wild stories about Galen Hieronymous and those weird 'machines' that John W. Campbell drew on paper. Just imagine, making a circuit drawing on paper, and having the thing work like a real electronic circuit! Unbelievable!"

Spoon nodded. "Unbelievable, true, but unpredictable, too. You see, I studied Hieronymous's patent claims, and then I tried to reproduce Campbell's experiments, the ones he talked about in the old *Astounding Science Fiction Magazine*. What Campbell didn't know, what caused him so much trouble, was what I found out last night. I called up his articles from the science-fiction data base on WorldNet. I made hard copies and did the experiments myself. An old hunch and a lucky coffee spill led me to the hypothesis.

"The secret, you see, is that you must have an interaction between the ingredients of the paper and ink pattern and certain neurochemicals in the designer's brain. The old concept of 'sympathetic magic' is real, but actually it has to do with magnetic fields of the brain, and not magic."

He puffed once again on the reluctant pipe, making more noise than smoke this time. "For macroscopic products — gears, castings, cars, bridges, buildings — this 'sympathy' makes no difference. The designer's 'brainpower,' so to speak, is insignificant by comparison to steel, concrete,

power generators, and the like. The gross laws of physics operate quite well at this level.

"But down on the molecular, the electronic, level — on the scale of your nano- and picodevices — well, the laws of statistical physics apply. The human brain's magnetic fields are strong enough to affect the actions of molecules and atoms — and of your tiny machines. Geoffrey, I hypothesize that the molecules of caffeine must stimulate, speed up, the chemical reactions in the human brain. These electric fields generate strong enough magnetic fields so that the designer unknowingly manipulates tiny particles of electro-matter. Your little nanoes."

"But why did everything stop all at once? Why didn't we see these effects gradually, Dr. Spoon?" Al Marik protested.

"A month ago, young man," Spoon answered, tapping his uncooperative pipe in feigned disappointment, "you folks around here, you got rid of all of the paper drawings and went straight from the computer screen to the fabrication machines. You broke part of the chain, the patterns on the paper." He saw the puzzled look on the young man's face.

"But what's the importance of the drawings, Dr. Spoon?"

"Ah, that's the secret, my young friend — the 'sympathetic vibration' between the human brain and the new creation has to have a real, *physical*, link." He reached down and fetched a crinkled, coffee-stained drawing from the floor. "Caffeine molecules from the same pot of coffee provide that mechanism, the link between your brain and your design. A link that ensures the nanocreations will perform the way your mind envisions them working. Without that link, you get — randomness, *nada*, statistical zilch!" He pointed at one set of stains on the engineering drawing.

A pattern of interconnected coffee cup stains, reminiscent of the international Olympics logo, overlapped the circuit design. "Voilà! Behold the link!"

"Thanks a lot for saving our company," Geoffrey al Marik said to Spoon that night. They were watching the new production run of nanoes, tiny droplets of bluish mist spewing from shiny output nozzles into liter-sized clear plastic bottles. The process reminded Spoon of a soft drink factory, but these bottles carried something more important than sugary water. Al Marik pointed out RealiTekk's revivification nanoes, the new all-disease panacea nanoes, and Noll's new "dry water nanoes," a revolutionary seeding technology that would soon make deserts bloom worldwide. "I'm very impressed, Dr. Spoon — but what in your background makes you so successful in finding out such weird and wonderful facts? Where did you get your education? Why couldn't someone else solve the same cases? How do you *do it*?"

Panlener Spoon stood in the exit doorway, patting the pocket containing the cashier's check that would finance his extravagant lifestyle quite well

for the next year. Smoke from his pipe encircled his head like a wreath. "It's like this, Geoffrey," he said between two long satisfying draws on his pipe. "Remind me to tell you, some time, about the unique sympathetic properties of one particular pipe tobacco."

He winked and was gone.



THE TERZA-RIMA CONFIGURATION OF THE UNIVERSE (A Layman's Confusion upon Reading Hubble's Law)

The galaxies are slowly moving out;
It's scientific fact. That spins each pair
Apart, not towards, we also know about.

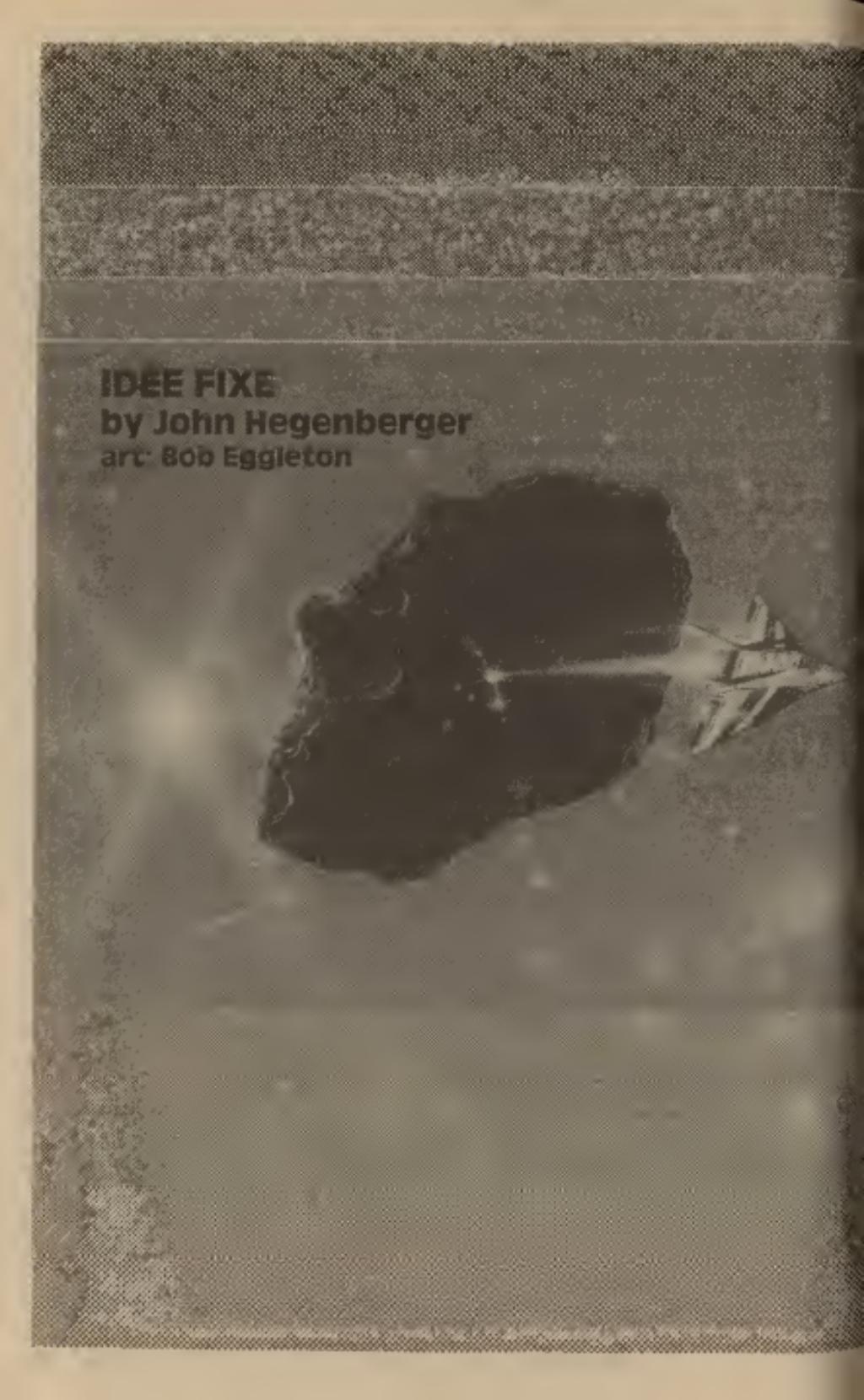
But does a one of you who wonders wonder where,
Just where, these wandering stars are wandering to?
If they expand, they're spinning off *somewhere*.

The universe is space and stars. Review
That also it is everything, and all.
Explain how something into nothing grew.

For if the galaxies do truly sprawl
With every turn of planetary spin,
So too the universe must spread its walls.

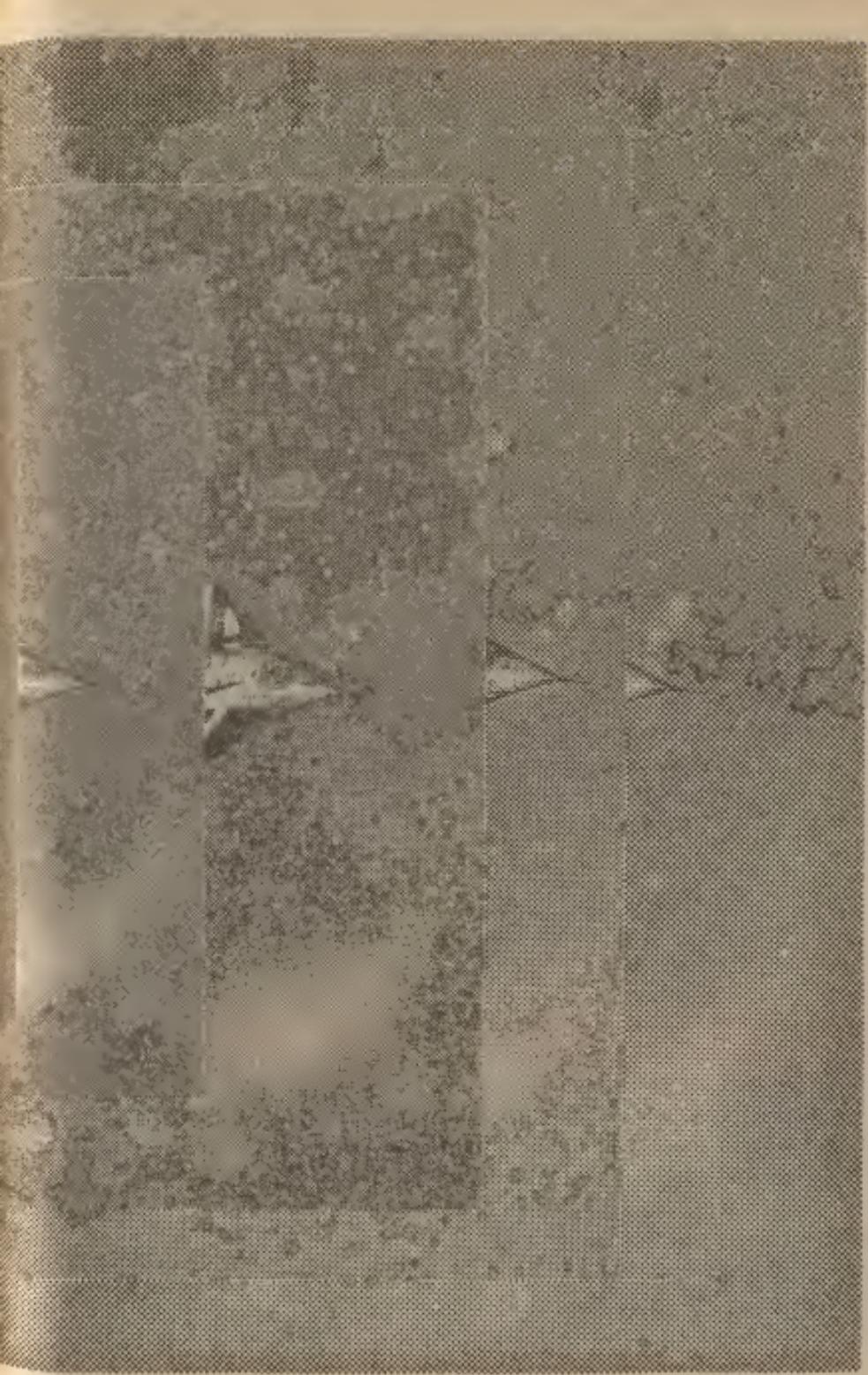
Impossibly now find yourself caught in
A nonexistent space that shouldn't have been.

— Kesterson Vaughan



IDEE FIXE

**by John Hegenberger
art: Bob Eggleton**



John Hegenberger's short fiction has appeared in Mystery Scene, Pulphouse: Report, and P.I. magazines. This story is his second sale to Amazing® Stories and is set in the same fictional universe as "Cicatrix" (November 1990).

1

"Believe me, Patricia, having children is not all it's cracked up to be. Mine haven't contacted me in thirty years." Professor Selena Mishko was the administrative head of Triage Foundation, the only medical research facility beyond Mars.

"No," Doctor Pat Emory said, feeling her face grow warm with embarrassment. "Children, or rather my lack of them, isn't the problem."

"Well, I haven't got all day," Mishko said, leaning forward in her bed. "In a few minutes my lungs will start to give in, and I'll have to repressurize the room. Out with it, girl, before you have to leave!"

Ever since the accident, Professor Mishko had been confined to her private lab, a hodgepodge clinic funded by various humanitarian resources and cloistered far beneath the cinderlike surface of Ceres. There among the cloying odors of lubricating oil, sterilizing solution, and human sweat, hundreds of Outer Planet refugees who were wounded, infected, and unbalanced since the Belt Wars came for care and comfort, while the silver-haired woman secretly tested the biomechanics of the Link.

"I've encountered something unusual," Pat said, "about the Link's ability to transfer thought."

Professor Mishko narrowed her eyes with interest. The Link was the renowned microvirologist's greatest achievement: a variation of the communications virus she'd developed during the war to help coordinate the cultures of Titan, Europa, and the other Outer Planets. Once assimilated, this viral soup permitted limited self-control of the body's neuroelectrical impulses. The firing of all axions at the same instant freed the mind, while stunning the body, creating a selective telepathic link between hosts who shared its use.

"One of my ops, Wolf Archerson," Doc Pat said, "was on the Link when his partner died. Later, Wolf complained of mentally 'hearing' unusual noises and even random phrases in the other man's voice."

"What did the voice say?" Doctor Mishko asked, rising from her bed. She dipped her feet into a pair of warm slippers and shuffled to the other end of the laboratory to adjust a dial on an electron microscope.

Pat followed, holding out the older woman's robe. "Apparently, nothing comprehensible, but you see the implication . . . assuming that my op is sane."

Doctor Mishko shrugged into the robe and turned, looking intently into

her companion's eyes. "And, is he?"

"Selena, I'm a trained psychiatrist."

"You're also the patient's friend and employer, and you haven't answered my question."

"Yes. I believe he's sane."

The older woman shut down the EM scope and prepared to extract the sample. "Well, Patricia," she said, "you've presented me with quite a curious problem."

"The patient," said Pat, "seems fixated on the idea that a transient message was sent at the moment of the other man's death and somehow it created a kind of steady communication state within his head."

"Hmmm . . . rattling around, as it were," Mishko mused. "He's probably feeling responsible for the other man's death."

"That's what I thought. Either that or . . ."

The elderly woman placed the sample under a molecular analog field and began to review its data on the computer screen. "There is still much we don't know about the effects of the Link, Patricia. I suspect that, in the long run, all those neuroelectrical firings may weaken a person's memory. What you've presented to me will certainly bear looking into, but right now I want you to examine something else." She indicated the design on the screen as her breathing became more labored. Pat would soon have to leave so Mishko could increase the atmospheric pressure in order to be comfortable in her lab. "I've cultivated the virus that caused your sterility. Watch what happens when I expose it to 500 rads of mu-meson."

Doctor Mishko pressed a key, and the magnified tetrastructures on the screen began to decay. Within eight seconds they had crumbled into a pattern of inert peptides.

"My God," Pat breathed. "You've found it: a cure!"

"We can eradicate the virus within you . . . with a bath of this radiation, but I'm afraid . . . there is only a fifty percent chance you would survive such a treatment."

"Still, Selena, it's a cure!" Pat said, hugging the older woman. "You've given me hope after all these years — hope that I can be normal and conceive —"

"If you survive, Patricia. I know this is something you've been wanting for a long time, but you need to think about . . . what will happen if the treatment . . . is not just successful, but fatal."

The Vax went *bleep*, and Doctor Mishko moved to answer it while taking oxygen from a tank near her bed.

Pat was awash with conflicting emotions. She sat on a lab stool and put her fingers to her temples. Children. At last, she had a slim chance of being a normal woman again and bearing warm, wonderful children. It was something she had wanted for a long time. The old girl must have been working on this for years. Typical of her to keep it a secret.

"Patricia," Mishko called.

"Oh, I'm sorry. What is it?"

The woman handed Pat a Vax copy, which read: "Urgent. Return here at once. The Gov is trying to shut down investigations agency. St. Mathew."

2

The door slid shut and sealed. Pat looked around and counted eleven other passengers in the automated shuttle. Her military status had gotten her a priority seating at one of the two computer access stations where she planned to review her notes on the Link in order to keep her mind off the hard vacuum outside the ship's hull.

A boring, recorded voice intoned the standard safety precautions and announced that the shuttle was ready to depart. Ceres was in relative opposition, so the trip back to Mars would take only thirteen hours.

As the macrogauss system repelled the vessel from the asteroid's surface, Pat settled into her seat and dropped a chip into the comstation, trying not to think about her fear. After almost a decade of command during the Belt Wars, she still needed something solid and substantial to occupy her mind while traveling through empty space. Well, she had plenty to think about during this trip.

Her fingers stroked the keys, adding new notes to the file she'd revised on the trip out, but her thoughts kept drifting back to Selena's discovery. The policy of Earth military personnel to accept temporary sterilization had permanently affected Lieutenant Pat Emory when she had begun active service. War was no place for pregnancy, and the military was no place for children. One of the attractions of the Innerplanetary Marines was that its selective virus sanctioned safe sex, replacing the potential of growing sperm or an egg with a benign neoplasm. Only in Pat's case it hadn't been benign.

Seventeen years ago, Pat had accepted the treatment that was still active within her body today. Since the day she'd retired from military duty, all attempts to eliminate it had failed. The virus had mutated into a tenacious parasite that blocked her ovaries' normal function, robbing her of any chance of naturally bearing children. No other cases like hers were on record. Patricia had decided to settle "out of court," receiving from the Innerplanetary Gov sufficient credits to establish her psychiatric offices and investigations business in Achilles, but it was small compensation.

At the time of the attack on Ceres, during the Belt Wars, Selena and Chico had been perfecting and refining the use of another virus that they called the Link. Pat understood the potential for such a telepathic substance — if it could be tamed — for advancements in her psychiatric work. Imagine being able to actually read your patient's mind, in order to immediately discover the knots in logic, the obsessions, the hidden mental traumas that were

sometimes all but impossible to expose, let alone treat! The Link's ability to connect the thoughts of its hosts meant that the two — or even three — minds could exchange information quickly, with only one drawback.

As the axions fired in each host's brain, the body was hit with a stunning blast of bioelectrical energy creating a near epileptic seizure. The subject could survive the attack, but the long-range effects were still unknown. In addition, many individuals had proven to be allergic to the substance. Still, Pat saw in it a vast potential and had successfully petitioned the Martian Gov to permit her exclusive use of the Link in both her psychiatric and investigative businesses.

A small chime sounded in Doc Pat's temporal implant. Almost on Pavlovian cue, her stomach began to growl. She rose from the comstation and stretched.

The shuttle had passed the midpoint of its journey. Pat purposely avoided the portholes, averting her eyes to the deck rather than gazing into the empty blackness of space. She was a grounddog, not a spacedog, and she knew it.

Typically, the choice of shuttle food was terrible: microwaved hegenbergers and fibersteak. Pat selected and prepared a tube of Napa Valley tea, drinking it and munching on a breadfruit bar she'd purchased at the Triage Foundation.

Passengers were now permitted to send and receive calls to Achilles, provided they could afford the expense. Pat attempted to reach Arthur McBain in order to get more info on the supposed takeover. Arthur was the government liaison who had arranged Tripleye's sanction for experimental use of the Link. He was also one of Doc Pat's closest and oldest friends. McBain and his daughter, Nancy, had lived in the old neighborhood near Stone Mountain where Pat had grown up. That was so many years ago, she thought. Just another reminder that I'm pushing forty.

Arthur's secretary said that he was out, so Pat returned to her notes. Now, if I were on the Link, she thought, I could reach Chico or any of my executive ops and get all the info I need immediately. It bothered her that she avoided using the substance. She convinced herself that it had something to do with maintaining control of her life without a biochemical support, unlike many of her patients. But was it really caution, or cowardice? The substance had proved invaluable in the day-to-day operations of her investigations agency. Chico had, of course, been quite accustomed to drinking a ten-milliliter solution of it every three days, and several of the other ops became proficient in its use within the first few weeks. Still, Pat remembered how awkward she felt seeing two or more of her employees standing stiff in a trance, silently conversing. Very eerie, indeed.

But the latest indication unnerved her even more. Wolf was beginning to claim that the Link let him communicate with the dead! Jonny's death had been a sudden and horrible tragedy; without any warning, a laser rifle had

cooked and sliced him. And, because the boy had been linked to Wolf at the time, the old op was afraid that somehow their two minds had been combined permanently in death. Pat doubted this, but there was still so much she didn't know about the Link's operation. Part of her regretted ever having asked others to use the substance. But what was done was done, and the positive results were working wonders for the detective agency.

Now the latest problem was that one of the ops, St. Mathew, had just reported that the Gov was trying to shut down Tripleye. Had they found out about the exported credits to Triage? If so, wouldn't Arthur McBain have contacted her direct to discuss the problem? Perhaps it all had something to do with Tripleye's recent investigation involving Weave Corporation. Representatives from that company were known to have associated with the team of weapons thieves that had caused Jonny's death, and Pat wanted to know all she could about the people who had killed one of her ops.

She decided to place a call to St. Mathew for more information. Then she realized that the shuttle had started its incline into the Martian g-well and would be landing soon.

Thoughts continued to swirl in Doc Pat's mind as the ship bucked the thin carbon-dioxide atmosphere: the problems with the agency, the potential difficulties with the Link, and the anticipation of a possible end to her infertility all failed to block the palm-sweating fear of an automated landing.

Pat clinched her teeth and didn't let go until she heard the computer announce, "Transhuttle Spaceways welcomes you to Marsport Achilles. Please prepare for customs and decontamination."

3

The executive ops of Tripleye filtered into the meeting room. Wolf Archerson took off his hat and hung it on the hook by the door. The short, heavy man once had owned the agency, and Pat kept most of the furnishings as they were when she'd bought him out.

Chico Kim came in, laden down with a file containing several ledgers and Vax reports. The Oriental woman appeared to have been working steadfastly in the office for the last twenty hours. Her attention to detail was at times almost obsessive, but this was one instance when Pat was glad Chico had stayed on the job.

Intensive Investigations, Inc., had been founded over thirty years ago as the first business of its kind on Mars. When Tripleye had fallen on hard times, Doctor Pat had acquired it to supplement her psychiatric office on the assumption that troubled people often found the cause of their trouble in their external, as well as internal, reality. Besides, Pat thought, I always wanted to be a part of a real private investigations agency. No doubt it was due to the years she had watched her mother working on the Atlanta Police

Force. And the company made good money from its Gov contracts, money that Doc Pat could quietly channel back to Mishko at the Triage Foundation for further research on the Link. So it all balanced out and made a comfortable and logical circle.

The small room was already becoming crowded when Jules St. Mathew breezed through the door and casually threw his lean, muscular frame into a chair, stretching his legs out under the table. He looked bored, but then St. Mathew always looked that way whenever Pat called a meeting of her key ops.

Wolf fired a sarcastic comment at St. Mathew. "Have a little trouble getting out of your bed this morning?" asked the bald op.

St. Mathew fielded the barb deftly. "I wasn't in *my* bed, old sock," he smiled. And then his face became stony, and Pat knew he was linking to Chico, whose features also stiffened momentarily.

Chico blushed and Wolf began to fume.

"All right," Pat said to avoid a confrontation. "Standard meeting procedures apply. No linking, please. I need your full attention and cooperation on this matter, Jules?"

St. Mathew put his hand behind his long blond head of hair and yawned. The insufferable egotist acts like he doesn't care what happens, Pat thought. Still, he'd been concerned enough to have sent the Vax to Ceres. But Pat knew from his private analysis sessions that this bravado was defensive and artificial. Jules St. Mathew was, surprisingly, her most insecure operative. He was also her luckiest.

"We received the notification right after you left," he said, gesturing to the official letter Pat had already read, which stated that the agency owed close to forty thousand credits in back taxes. The charge was absurd, but Pat worried it might lead to a Gov investigation to her off-planet investments.

"Did anyone contact Arthur McBain?" she asked.

"I called him right away," St. Mathew said. "He claims that his hands are tied and that a full audit is scheduled, which will probably shut us down."

"That's when we decided to send you the Vax," Chico added.

Wolf looked at the two other ops and growled, "We? What's this 'we' shit?"

Chico shook her head. "Calm down, Wolfy. You were out, and I was the only one in the office when St. Mathew made the call."

St. Mathew smiled at Wolf and then winked.

Doc Pat cut in before the older detective could explode. "Stop it, you two. This is very serious; if we don't respond immediately and in a mature manner, the company could lose its charter, to say nothing of our Gov contracts. Chico, we need to file an injunction right away. Why are you *smiling*, for heaven's sake?"

The Korean woman nodded to St. Mathew.

"Ah, I get it," Pat said. "You're already ahead of me, right?" Regardless

of his attitude, Jules was a professional. Pat knew he cared as much about the agency's future as she did.

"I took care of it this morning," St. Mathew said, gesturing. "There's a copy in the file."

"Say —" Wolf interrupted. "Who's in charge around here, anyway?"

"Hang on," Pat said, raising a palm and studying the document. "Very nice, Jules. This buys us a little time, but I'll need to refile it properly, since you've forged my signature. It'll be too easy to prove I was off-planet at the time. Someone is coming down hard on us, people, and we can't afford any mistakes."

Wolf cleared his throat. "Just so you don't think I've been sitting around growing hair, Chico has my full report on that laser theft of two weeks ago. I think you'll find it interesting, Doc."

Chico was already placing a data chip in the Vax when Pat looked over. It was nice to have such an efficient team, even if the ops didn't always get along well with each other.

The Vax displayed a high-angle shot of two men coming out of customs at the shuttle port where they were met and greeted by a third man whom Pat recognized immediately. "Amos Brew," she said.

"Right," Wolf answered. "And the big guy in black is the one I tangled with after he shot Jonny. His full name off-record is Crusher Cloud."

Pat watched the port-of-entry video carefully. This was the first time she had seen the three-meter-tall bruiser Wolf had told her about. The camera was at an awkward angle, but it still caught the man's leaden expression, creating a feeling that his face was false . . . or dead. The other man, lean with hawkish features and a head of close-cropped grey hair, was obviously alive; he earnestly grasped and shook Amos Brew's hand as the two met in welcome.

"That's Eric von Roon," Wolf said, placing one of his information mods into the slot in the top of his head. "He's the CEO of Weave Corporation, and he came here to meet with Brew, his local Operations Manager, to try to buy out Blue Star Industries. Crusher is registered as Von Roon's body-guard."

St. Mathew whistled softly.

Chico slid a piece of paper in front of Doc Pat and explained its contents. "BSI reported a theft from its research labs last week. It's a class-three reward for some sort of post-mod biosubstance. Supposed to enhance interface between computers and neurosystems."

"They call it the Snot," Wolf said, and Pat couldn't help grimacing. "Something to do with the way the stuff looks. I think my big buddy there stole it after his boss couldn't buy out the company. Remember that black canister they took off planet? If I'm right, we've got a real edge on solving this and collecting the reward."

"Where's Von Roon now?" Pat asked.

"On his way back to Earth. And the minishuttle that Crusher escaped in has been reported docked at Vegas. The military traced it there, but they couldn't find Crusher or the canister or even the modified laser weapons. You know how easy it is to get laundered in a place like Vegas."

Pat nodded. Vegas was a pleasure port, a bordertown in a relatively stable Lagrange point where the Marines had gone for R and R during the war. Thousands thronged there each year and lost millions to the VisionDuel and fantasy-analysis games. The station's Gov and security forces were the most corrupt in the system, but you could buy almost anything there and have a hell of a good time with it. If you survived.

A second Vax, on a countertop where Chico usually worked, went *bleep*.

"Don't answer it," Pat told the other woman. "Just get a copy. We don't want to be disturbed." She went back to studying the video of Von Roon. "Weave Corp was rumored to have manufactured the magnetic mines that killed so many people during the Belt Wars," she mused. "They're one of those old-line Earth corporations that have a finger into everything."

"That's not all," Chico said, handing Doc the Vax copy. "Arthur McBain thinks they are the ones quietly lobbying the Gov to initiate our tax audit."

Pat looked directly at St. Mathew.

The man shrugged nonchalantly. "So, I asked him to check."

The psychiatrist and owner of Tripleye took a deep breath. "Okay. . . . Here's how we're going to play this one. Chico, place a call to Blue Star and tell them we've got a lead on their missing . . . stuff. Get Tripleye a quick contract to investigate and safeguard Blue Star's corporate offices and research center. That'll be your job, Wolf. When you get there, quote them a rock-bottom price; we don't want to lose this assignment."

Wolf consulted the mod in his head. "They operate one of the geothermal stations down in Dirthtown. Don't you think we ought to have someone there just in case? These are nasty guys we're dealing with; believe me, I know from personal experience."

"Those sites are already protected by the city's security cops," Pat said. "And Weave Corp probably got all it wanted out of BSI when that Crusher person snatched the black canister. But I'll keep the thought in mind."

She went on. "Jules, you're going to Vegas." The man smiled coolly. "I want you to find where Crusher disappeared to and let us know via the Link, if you can, where to find BSI's —"

"Snot?" he asked.

"And no gambling, or whoring, understand?"

St. Mathew raised his eyebrows and placed his fingers on his chest, as if to say, "Who? Me?"

The other three members of the team frowned in unison, "Yes, you!"

The meeting started to break up. Doc held them together for one more comment. "I don't think I have to tell you what this means. It's not just our little company that's involved. We're into something big; just how big is the

first thing we need to find out. Don't take any unnecessary chances. Chico, I'm afraid you'll need to stay here and help me get the files in order for the audit. You'll also need to run Link Central for Wolf and Jules. I'll deal with our other clients, and it might be a good idea to check BSI's geothermal station, after all. The rest of you report back here as soon as you learn anything new. Questions?"

St. Mathew said, "Nope," and left the room without another word. Wolf Archerson grabbed his hat and said, "Piece of cake."

Pat shut off the video on the Vax and handed the chips and papers to Chico. Everything was happening quickly, and she hadn't had to juggle this much trouble in a long time.

"Thanks, Chico."

"Uh, Doc. . . ?" the woman asked. "Under the circumstances, don't you think you should maybe be on the Link? You can coordinate operations a lot better when you can reach us all telepathically."

Pat considered her options. Why was she afraid of the Link? Because it might expose her innermost thoughts? Undermine her position of authority within the agency? Hurt her someway, just as the military's sterility virus had? She'd functioned well without it up until now, but the current circumstances were becoming extreme. Someone was trying to crush her company and maybe a whole lot more.

The Link was a virus, and years ago another virus had denied Pat the chance of creating a child. In response, she had focused her energies on building a career in the business world. But now, that creation, too, was being threatened, and her avoidance of the Link was beginning to seem like a silly *idée fixe*.

She had just told her ops not to take any unnecessary chances. So, which option posed the greatest risk: to take the Link, or not?

"I — I don't know," she said. "I'll have to think about it."

4

There are all sorts of sciences, Patricia reflected: clean and quiet psychiatry, delicate and careful research, and hot, gritty, noisy, industrial mechanics. Here at the BSI geothermal site, Pat was quickly awed by the enormous laser-drilling, pressure-heating, microwave-melting, refuse-consuming, and radiation-burning operations.

All around her in the huge cavern were dirty and grumbling substations designed to burn trash, melt plastic, pump vents to the center of the planet and back, receive hot gases, operate turbines, generate megavolts, exchange heat through fluids, and generate radioactive power to continue these operations during an emergency or crisis.

The facility — one of three that supplied power and heat to all of Achilles

— was packed with rubble, noise, filth, and the combined odors of rock dust, ozone, and human sweat. All of which were partly blocked by the helmet and air filters Pat wore as she picked her way through the messy installation. This was certainly a science far removed from her quiet, cultivated psychiatry and deductive logic offices.

The raw heat was the first force to offend her. Achilles was in some respects a giant spaceship, self-contained in its manufactured environment. To get to this location, Pat had had to pass through one of the city's vast greenhouses — a better description would be hothouses — that lay adjacent to the geotherm station. The humid temperature there must have been in the high eighties; encouraging for plant growth, but withering for humans. After walking through this jungle, she had arrived at the relatively cooler Blue Star Industries power station, but Operations Manager Duke Lexington wasn't in his office. He had gone out to the drilling site to settle a dispute and get work started up again.

Pat had been given a helmet and directions to the operations area. Thus, she now was shielded somewhat from the chorus of physical forces around her as she walked cautiously through the seemingly chaotic facility.

At last she came upon a group of workers standing near the edge of a wide bore hole.

"Excuse me," she said. "Is there a Mr. Lexington here?"

The group turned to look at her. Most of the helmets the workers wore were covered with graffiti, except for the faceplates.

"Yeah? Who are you?" a large, dark-skinned man replied.

Doc was impressed with the looks of this fellow. "I'm the special security guard from Tripleye," she said. "Your main office sent me down to keep an eye on things."

The big man laughed and the other workers joined in. Pat could see that several of the workers were women, and since Lexington's skin was as black as hers, Pat decided the derisive laughter wasn't sexism or racism, but rather a class reaction designed to challenge an outsider. These tough, sweat-collar workers were putting her through a mild group-bonding test. She added, "I'm Lt. Commander Pat Emory, IPMC, retired."

That got her nothing but silence. Which, possibly, was the right response.

Op Manager Lexington turned back to address his workers. "Okay, Lucky, you get the picture. I want this well capped off in forty-eight hours. Now get your crew moving, or you're all history." Then he started walking away and called to Pat, "Come on."

She stepped up her pace to reach the man. This was not the way she planned to conduct the interview.

"Mr. Lexington —"

"Call me Duke, Commander."

She drew abreast of him, nearly tripping on a valve that ran across their pathway. "Hold it, Duke. Where the hell are we going in such a hurry?"

The man stopped, turned, and looked at her through his visor. "You know anything about geotherm operations?"

"A little," she answered, adding quickly, "but I could stand to learn more."

Duke nodded. "Then let's take a quick tour."

They wandered through the facility for the next half-hour. It seemed to Pat that the operation had something to do with microwaving oil and plastic refuse from Achilles until it became a hot liquid. Then it was pressurized through a lock that lead into a bore hole that sent the gunk down almost three klicks to the Martian magma, where it became a gas. The expanding fluid shot up a depressurized vent, gave off its heat through a series of ex-changers, and drove a row of turbines to produce electricity.

"Cogeneration," Duke said as they stood on a platform over the pressure lock. "Nearly a third of an exajoule each year from the combined heat transfer and electricity. And the other two plants run by our competitors do the same."

Pat guessed, "You must be putting out more power than the launch accelerators on the surface."

"A whole lot more. Our electrical generating capacity is nearly a thousand megawatts. Let's go down for a closer look." The man stepped into a wire cage that ran along a track up and down the outer surface of the pressure lock.

"Wha— what?"

"Come on," he said, gesturing. "It's all part of the job."

Bullshit, she thought. This is another test. He must be awfully insecure to need to play these silly games.

She stepped onboard, and he closed the cage door while activating the pulley engine.

They slowly descended past the side of the pressure lock.

"What's this for again?" she asked, as the rough wall of rock seemed to press in toward the lock's metal surface.

"The melted plastic would start to harden again if we didn't keep it under heavy pressure. If it became solid, it wouldn't flow down to the magma, would it?"

Pat looked up. The wide opening at the top of the hole was rapidly dwindling, and darkness closed in around them. "How deep do we go?"

Duke shrugged. "Only a kilometer," he said, switching on the light in his helmet.

Doc swallowed and did likewise. It was getting hotter, and she felt as if it were becoming harder and harder to breathe. No, this was definitely not at all what she had imagined the interview would be like. The sweat was now running off her body in streaming trickles. Duke Lexington didn't seem to mind at all. He was casually talking to someone on a portable comunit attached to his helmet next to the graffiti that read *BORN TO BORE*.

Finally, Pat could see the bottom of the hole rising up to meet them. And within minutes, they were back on solid ground, albeit a lot lower than she preferred.

"Okay," he said, getting out. "We can talk in safety here."

"Safety!" Pat yelped. "Next time, buster, we're meeting in my office. That's safe enough for me."

"So, what's the story?" Lexington asked. "Why does the company need special security ops? Somebody think my people are spying for the competition?"

Doc stayed in the elevator cage. "This is just a routine investigation," she said. "And I can conduct it better on the surface — I mean, in the cavern. Oh hell, can we get out of here, or do you have some deep-seated paranoia about losing your job?"

Lexington came back into the cage. She suddenly noticed a strong sexual attraction to the man. "Look who's paranoid now," he said, starting the pulley engine, and the cage slowly crept up the track.

Contrary to her facade of confidence, Pat did not handle stress with grace. Growing up fatherless in the inner-city area of Stone Mountain, the daughter of an Atlanta patrolwoman, the young, olive-skinned woman had struggled to graduate from Georgia Tech class of '87, supplementing her income with a ROTC scholarship that led to her receiving a degree in Advanced Psychiatry. Her knowledge of human nature was put to the test during final training at the IMPC's Camp Lejeune. She'd received a lieutenancy and was assigned to the psych ward on Elsix, a confusing and frustrating job. Then she'd run afoul of General Carver, who didn't care for the style of her de-stress conditioning of his troops. He claimed that "the irresponsible comments of a black corpsman during time of war" undermined his troops' fighting spirit and contributed to poor morale during the Battle of Io.

Doc Pat was soon reassigned to the front lines, where she gained firsthand experience of the etiological factors of battle fatigue during the fight for her life near Ceres. Remarkably, she held her own against the "Outies" until the war was over; she not only survived, but gained the rank of Lt. Commander before taking early combat retirement at the age of twenty-nine. While she was stationed in the Belt, Pat met the famous microvirologist Doctor Mishko.

It was during a rush evacuation of the Triage facility, due to an Outie mining operation, that the two women met. For nearly three centuries, mankind had successfully mined the asteroids, but the Outie terrorists gave new meaning to their name when they introduced their magnetic explosive drones into the crowded and chaotic Belt. Pat's troops were constantly kept busy sweeping the area around the inhabited planetoids for the deadly devices.

During the evacuation, Dr. Selena Mishko and her assistant, Chico Kim, had become trapped in an airless passageway. Pat had helped rescue them.

Chico had quickly recovered, but the lack of oxygen together with poisonous gases from the mines permanently destroyed sixty-five percent of Mishko's lung tissue, leaving her to live the rest of her life in a pressure suit or a specially constructed room. Thinking of it now reminded Pat of the stressful pressure in her own chest. Why am I so uncomfortable down here? Is it this man or —

Suddenly, the cage stopped in its tracks.

Duke tried to restart the engine, but there was no response.

"What's wrong?" she asked.

He only grunted and quickly placed a call from his comunit.

Pat's worry began to swell. This is psychophysiological, she told herself, as the pressure in her chest came back.

"We've been having a little trouble with power outages," he supplied. "The emergency nuclear generator has been activated. We should be moving again in a few seconds."

Small comfort, Pat thought. If I were on the Link, I could send for help. How can I afford to let my own selfish fixations jeopardize the agency's future? I've got to overcome this and become a part of the team.

Pat felt a lurch as the car began ascending. She looked up at the tiny light source at the top of the hole and thanked God.

Minutes later, they were back in the cavern, where Duke immediately called for a meeting to investigate the power outage. Pat spent the rest of the day learning about geotherm operations and examining different causes for the drops in power. No clear source was identified, but it seemed certain that some human factor was the cause. Since the station employed over three hundred on-site personnel, all of whom had been loyal to the company for several generations, it seemed unlikely that any of them would risk such a drastic change in lifestyle as to support the competition by trying to sabotage BSI's operations.

So, what did that leave? All Pat knew was that she was tired after a sixteen-hour day in this hell hole. Finding that she could no longer think straight after this first day on the job, she wearily shuffled back through the hothouse and caught a ground shuttle out of Dirltown to her apartment near the center of Achilles. Affording herself the luxury of a real shower with real water, she relaxed and fell exhausted into bed.

Now that there was a faint possibility that she could conceive and bring a child into the world, Pat ruminated over her own childhood in the USA. It no longer seemed as trying as she once remembered it. It had been an awkward time for relationships with boys, what with her job, her schooling, and the responsibility of looking after her sister, Amber. And her mother had

worked a lot of third shifts, serving and protecting the streets of Atlanta as part of the area's police force. But life is almost always simpler when you're young and educable.

Arthur McBain was the only person in Achilles who had known her back then. He and his daughter, Nancy, whom Pat only vaguely remembered, had immigrated to Mars while Pat had been stationed near Io. Nancy's tale was one of uneven success.

The owner of the House of Holos, Adam Wu, sold a new business concept to the VideoMars theatre chain; together, they sponsored a "Miss Mars" contest. The finalists were auditioned, and a CDVax was cut and placed on the end of a series of popular sport concert programs. The viewers voted Nancy the winner. She and her father came to Mars so that she could play a lead part in the *Captain Columbus* series. Eventually, Nancy met and secretly married Vax executive John America, and returned to Earth. But Arthur remained behind, working as part of the Gov's Permit and Contract Department. Ever since then, Arthur had looked fondly after the "stoic, little girl" whom his daughter had once known. Pat suspected that there was more to his interest than misplaced parental concern, but the man was always quite formal in all their dealings.

Arthur was in the Tripleye offices this morning, trying to straighten out the tax tangle and advise Pat of semiclassified info on Weave Corp. The heavyset, stoop-shouldered man stood in her office, wearing an innocuous woolover two-piece suit of dark blue that made his rust-colored skin look old and worn. The wire-rimmed glasses perched on the end of his flat nose reminded Pat of the man's affinity for antiques. He was a self-centered yet humble person, and he knew more about Gov operations and politics than anyone she had ever met. She wished he would just take care of the whole mess.

"Now, you're going to have to produce records showing full income during the buy-out procedure: the annuity from the IPMC, any windfall or gambling profits, income from the Gov contracts and inheritances, plus the normal profit from the psychiatry and investigations businesses —"

Pat had a difficult time following the instructions. Her mind was on the Link. She looked at Chico tapping away at a data program, trying to get answers that would help keep the business free from Gov control. Wolf and Jules were on the job, standing double duty. Why did Pat think she could continue to harbor her prejudices when the others were pulling more than their fair shares? They could get so much more done, and it would reknit the spirit between her and her ops.

But a virus had hurt her once, robbed her body of its natural ability to conceive a child.

"Are you listening, Patricia?" he asked. The centers of his eyes seemed solid black, and the whites were lined with red from decades of attention to detail.

"Oh . . . sorry, Arthur," she said, sighing. "I appreciate your help, but I had a rough day yesterday. And there's a lot happening in my life just now. Chico helps on the accounts; maybe she can show you what you're after. I'm terribly tired."

"Young lady . . ." Of course, no one else would ever think of referring to Pat in those words. "You've got to be a part of this. I see that I'll have to do something dramatic to impress upon you the enormity of your situation."

Pat made a skeptical expression.

"How does this grab you?" he asked. "Weave Corp is trying to gain a fifty-one percent ownership of Achilles Municipal Management."

Pat sat up. "They're trying to buy the city? Keep talking."

"Well, it's not all together certain, but the indications are that Von Roon would like to see the current management group fail so he can come in and incorporate. He holds the ticket on basic investments, or at least his company does. It seems Achilles' founders signed a nonbankruptcy agreement decades ago that made the city a Donor World; if the company doesn't show a profit, the note comes due and the lender corporation can liquidate it as it sees fit."

"And Weave Corp is the lender?"

"Not originally, but —"

"But Von Roon managed to maneuver into that position," Pat mused. "And now he wants to take over operations. But that's insane; the people would never stand for it."

"Well, he won't shut the city down because he knows it can be made to turn a profit, but he might bleed it to a slow death, or begin some sweeping restructures that are better suited to his personal interests."

"But why chase after my little business?"

"Because, young lady, you've interfered with his plans. And you still are, I imagine. Von Roon is a very forceful man. Did you know that he's also the head of the Neosocialist party? You don't get to a position like that without being a power to be reckoned with."

"Keep talking, Arthur. You've succeeded in capturing my full attention."

"Well, the Neosocialists were a splinter group of the democracy versus communism struggles of the twentieth century. The group managed to limp along during the twenty-first, due to the combined forces of planetary expansion and conflicts like the Belt Wars, which fostered intense planetary pride. Finally, with the Great Crazie Days of the turn of this century, Von Roon started to move the party and his corp closer and closer together. Now he's perhaps the most politically powerful individual on Earth."

"I wondered," Pat said, "why such an important man would take the time from his busy schedule to come all the way out to Mars. He was looking over his prospective purchase." She pressed a key on the Vax, saying, "Chico?"

The Oriental woman's voice came back after a few seconds. "Yes, Doc?"

"I want you to research the data banks for info on the Neosocialists." She

looked at Arthur, who nodded. "I seem to remember something way back about a psychiatrist named Jung, so you might want to cross-ref that, too."

Chico sighed.

Pat asked, "What's the matter?"

"I don't think you realize how much work you've given me already, Doc. Preparing for this audit is a full-time job, and I've got to keep in contact with the other ops —"

"I'm sorry, Chico. You're right," Pat answered. It wasn't like Chico to complain, but these were extreme circumstances. Perhaps they were affecting Chico as much as her boss. "Arthur McBain is here to give us a hand with the taxes. Why don't you come into my office while I send a note to Tamara at the data vaults; she owes me a favor, anyway."

Chico came in and quietly set up two portable data comps on the meeting-room table, while Pat sent her request for info to the city's main computer bank.

"You know," Arthur said, "with a bit of luck, the vaults might give you all the investment and tax info you need as well."

Doc Pat cast a quizzical glance at Chico.

The young, dark-haired woman said, "I'll get on it, right away."

Pat was a little surprised. It wasn't like Chico not to have checked such an obvious source of data; something was definitely bothering the woman.

The rest of the day was filled with calculating and collating escalation and depreciation percentages, dividend compounding, net buyout averaging, and corp tax discounts. By nighttime Pat's head was humming and her eyes were blurred. And this only covered the firm's first year of operation. The only respite from the back-breaking number crunching was when Wolf linked in with an update from his stakeout at BSI. St. Mathew was a loner, so there would be no communications from him unless he got into trouble.

"Why hasn't someone invented a program to cut through all this calculation?" Pat pleaded.

Arthur took it upon himself to answer. "Mostly, because every case is different, and your audit is the most thorough I've seen in many a year. They mean to get the forty thousand credits, or shut you down."

"Just who does this city think it is, anyway?" Doc asked, blowing off steam. "I've helped solve some of its toughest scams it's ever seen, from dealing with off-planet shuttle repos to locating and handling dampened radioisotopes. Remember that Warpman hostage crisis? The local security cops were too afraid to go in. Wolf and I had to talk those loonies down, and all we got for our trouble were autographs and a couple of passes to the rest of the season!"

"Patricia, please," Arthur said, rubbing her shoulders to show her how much he cared. "This isn't like you. Calm down and try to deal with the situation as you would advise one of your patients."

"Thank you, Arthur," she said, rising from her chair. "You've been a

dear, as usual. But I think Chico and I can handle things until tomorrow."

He seemed disappointed. "You want me to go?"

"I'll call you," she smiled, leading the man to the office entrance. "Perhaps we can have lunch tomorrow, and you can tell me all you've learned about Weave Corp."

He shrugged. "Very well, Patricia. Tomorrow, then."

They embraced lightly. Pat said, "Good night."

He went out the door. She moved to a locked cabinet behind her desk. Chico still tapped away at the keyboard, intent on her calculations.

Pat thought again of her fixation against hosting another virus within her body. She opened a drawer in her desk and stared at the backup squibs used by her ops when they were in the field and couldn't get to the office for the standard Link treatment. She still feared them. Who really knew what they might do to her? The last virus had taken away one of her body's natural abilities: that of bearing children. She could always try an embryoplant, but that just wouldn't be the same, she thought. I want my own child, not someone else's.

So, there it was. Her problem was only partly physiological. Her own attitudes were keeping her from using the Link. But as a trained psychiatrist she knew that understanding one's fear doesn't automatically make it less dangerous.

Slowly, she picked up a squib. That moment yesterday in the pit had brought her fears to the front of her consciousness. If it had been a real disaster and she had been on the Link, the problem could have been solved much more quickly and efficiently. And now her surrogate child, the agency, was at risk, not to mention the livelihoods of her loyal employees. They hadn't hesitated to face their fears and take the Link, so why did she?

Pat placed the needle against the back of her neck and clinched her teeth. Whatever the outcome, she would do what she could and become a functional part of the team.

As the substance entered her neural system, the room shimmered as if it were suffering the effects of a minor quake. The lights seemed to pulse with the same resonance of Pat's heartbeat while her body froze. She heard a faint singing or humming, much like the sound Jonny used to make under his breath when he was intent on his music.

Chico worked at her station. Pat felt as if she could see the comp display from Chico's point of view. The numbers streamed into Pat's consciousness, filling her with all the calculations as they streamed through Chico's awareness. But there was another awareness, too. A faint, quiet contentedness, floating up from Chico or near Chico or in —

Pat gasped. The Korean woman stiffened. They were on the Link together. All three of them: Pat, Chico, and Chico's baby.

Pat couldn't help feeling an ironic ache of envy. One virus had taken away her chances of having a child, and another one had put her into telepathic

contact with an unborn baby.

6

The next morning, after having accepted her uncertainty and taken a full dose of the Link, Pat was back at the BSI geotherm station, ostensibly on security stakeout. What she was really doing was considering the Link's potential.

The psychiatric possibilities were interesting. It could help patients to exorcize their inner thoughts and feelings, and the attending physician would no longer have to wade through a mire of repressions. Provided the patient wasn't allergic to the substance, a correct diagnosis might be made in an instant. Doc decided to try it out on Wolf. If there were some way to loop it back to him, he'd see that his "ghostly voice" was just repressed guilt for Jonny's death.

The known uses of the Link were limited, however. Conscious thoughts were "driven" by the sender and could be selectively directed to a receiver, only if the receiver cooperated. Once the sender stopped driving the Link, the receiver could no longer get a clear communication. Thus, when either user was asleep or unconscious, only faint, low-grade holistic sensations, such as fear or contentment, could be transmitted or received.

Since a side effect of electroneural linking was to "freeze" the user's nervous system with a mild seizure, exotic activities like shared sex were out. Much to St. Mathew's disappointment. High-grade stimulants and depressants muddied the reception, which helped to explain Wolf's voices since he'd been drinking a lot of wine lately.

Doc Pat linked to Wolf Archerson and was gratified to receive a clear response.

What's happening at the Blue Star Industries offices? she asked, feeling her muscles stiffen.

Hi, Doc, Wolf linked back. *Chico told me you'd decided to join us. Welcome aboard. I've just finished scanning one of Von Roon's recent employee relations presentations. It's kind of enlightening.*

How so? God, this is strange!

Yeah, it is, ain't it? But wait until your joints start to creak. Anyway, Von Roon figures that anyone who's not with Weave Corp is "pioneer rubble."

What?

Listen, I'll read you some of the more interesting parts. "Nonmembers have no vision. They are uninformed and lack creative spirit."

Sounds like he's a strict disciplinarian.

No shit, Wolf said. *And get this: "Soon mankind will touch the stars. We must be prepared to meet this challenge by remaining pure and clean in mind and body. The pioneer rubble in the Belt and the Outer Planets are subhuman in*

their lack of planning and organization. They must not be our vanguard.”

This is an employee relations speech?

Pretty weird, huh? You want more?

No, Pat said. The pain is getting too intense.

Okay. I'll scream.

Pat took a few minutes to walk around the power station, working the stiffness out of her joints and observing the workgangs at their various tasks. Duke Lexington was scheduled to come into the operations center in the next half-hour to receive Pat's latest security report. The results were not good: BSI workers were loyal with regard to the competition, but there were many other influences in a person's life aside from employment. Religion, for instance.

The head of Tripleye decided she should get an update from Chico before handing in her report. Besides, it also meant she could use the Link again.

Chico. How are you doing?

The Oriental woman still seemed reserved. Perhaps she sensed Pat's envy; perhaps she still resented being stuck at Link Central. For some reason, she was cool to the subject of her baby. Pat now felt uncomfortable whenever they communicated.

Fine, Doc. I'm fine. I ran a cash-flow analysis of the public records of Weave Corp that Arthur got for us.

Yes?

I'm not sure, but there seems to be some fairly large amounts of credit transferring to accounts that cross-ref with those of a few BSI employees.

Payoffs? Pat asked. Maybe they're bribing Blue Star Industries officials.

I — I don't know. It might just be going to middle managers or workers at the geothermal station. You'd better be careful who you —

A sudden explosion shook the operations building, knocking Pat off her feet. She looked out a wide plex window and saw a huge gout of black steam burst up from the main vent near the heat exchangers. Alarms rang all around her. Workers hurried in a panic to escape the rolling clouds of scalding pressurized gas.

Chico. We've got an A-red emergency here. Send security and rescue teams, and tell them to wear masks and shields. The entire cavern is filling with dense, black gas!

Pat signaled for Duke's helmet in order to try to get some idea of what was happening near the explosion.

“A transformer blew up,” he said, sneering. “Just about ripped out the side of two heat exchangers. The gas is mostly steam mixed with a small leak from the returning oil and melted plastics. We'll need to evacuate if the cloud gets any denser.”

“Was it an accident?” Pat asked. She could hardly hear Duke's reply for all the alarms going off and the roar from the disaster site.

“I'm sure it's sabotage, but how can I separate the guilty shitheads from

the three hundred loyal workers?"

"I've got an idea," Pat answered, "but I'll need to use the Head's Up Display."

"Go ahead; things couldn't be worse."

God, I hope not, Pat thought. There was a slight chance that what she was planning could endanger the entire facility, permanently. But, as Wolf had once told her, "Sometimes you gotta break a few heads if you expect to crack a case."

The HUD popped to life, sending Pat's voice and image to the upper right quadrant of the interior of each worker's faceplate. Pat pushed the gain all the way to max. "May I have your attention, please?" she asked. "Everyone please keep calm. The situation is under control. A few uncreative and inferior persons have tried to disrupt our operations, but these weak, insipid individuals will soon learn that they have little chance of success."

Pat imagined that Duke was having a fit over what she had just announced. If anything, her comments would inspire the saboteurs to further their attacks rather than end them. But that was exactly what Pat had in mind.

Again she made the announcement, purposely ignoring the radio calls from Duke and the other line operations supervisors, hoping to draw out the attackers so they could be dealt with.

She was standing stiff, linked to Chico for an update on the rescue teams, when the two men came at her.

Out in the cavern, every other able-bodied worker was scurrying about as emergency procedures dictated. But within the operations office, two burly, helmeted men rushed in and took hold of Pat, rendering her unconscious with a well-placed blow to the back of the head.

When she awoke, she found that they were carrying her on a stretcher, as if she were a victim of the disaster. Pat immediately linked to Chico. *I'm in big trouble. I tried to run bluff on the saboteurs, taunting their ideologies to draw them out, but it worked too well.*

I don't understand. Where are you?

Pat went off the Link long enough to try to get her bearings. Through the chaos and the dark clouds of gas and steam, she thought she recognized the shape of the emergency nuclear power plant.

Dear God! I think they're going to try to take out the backup power. That will shut everything down and contaminate the entire facility. Chico, you've got to call direct to BSI; try to get Wolf to help you. Warn them that all of Achilles may be in danger.

Pat came off the Link to hear the two men planning to "destroy two problems with one blast." She rolled out of the stretcher, trying desperately to get her footing in the jumble of pipes and tubing that supplied the minireactor.

One of the men grasped at her and swung an impact hammer. "So we're

weak and inferior, are we?"

"Yes," Pat grunted, bringing up a knee. She hit the man solidly in the crotch, then ripped away his mask. She wanted to gulp down a few breaths of fresh, clean air, but the other man struck her from behind and shouted, "You filth! Weave will win out against all you dirty little people." Her head rang from the blow and her lungs screamed for clean air.

He hit her again, and through smeared vision, Pat saw him break the security seals and open the reactor's shielding, saying, "Let's see what you look like during meltdown."

Chico. Wolf. They're opening the minireactor and releasing hard radiation. What!

Like zealots, they're sacrificing themselves and taking me with them!

Pat brought a heavy chunk of rock down hard on the back of the man's head. *What do I do now?*

Wolf shot her back an answer. *I've got one of the BSI engineers here with me, and he's going to tell us how to shut the reactor back down.*

Thank God. What do I do? She felt a subtle vibration throughout her body.

For the next hellish minutes, Pat froze and linked to Wolf for instructions, then unfroze and struggled to execute the next phase of the reactor's shutdown. She seemed to be trapped in a nightmare of commands and sensations. She thought she heard laughter, but the dark smoke and gas clogged her lungs; the exposure to the radiation made her body burn; and the chaos all around her blurred her perceptions until the laughter blended in her mind with a harsh roar that turned into a pulsing music that seemed to carry a faint but broken voice.

Then the blackness took her down.

The next sensation Pat felt was searing pain.

It ripped her from unconsciousness and deposited her in a clean white hospital bed.

Wolf linked, *Hey, I think she's awake.*

Pat tried to focus on the bright light reflecting off the bald man's head.

"Doc?" Chico asked. "Are you okay?"

Pat wanted to answer, but her throat was as dry as Hellas plains. Someone squirted water into her mouth, and she tried to swallow. Most of the water washed down her chin, but she felt she could use her mouth again for more than rough breathing.

When she finally focused on Wolf and Chico standing over her together, she immediately thought of the baby. She must have linked the thought, because Wolf asked, "What baby?" and Chico shook her head in warning.

A doctor passed before Pat's vision and said something encouraging about her condition and the tests. Whatever that meant.

Pat drifted off to sleep, wondering if the Gov would extend its deadline for the back taxes now that she was hospitalized.

* * *

When she awoke, they were all there again. MediCen must have been using a regular schedule of stimulants. That was the only reason they could all be on hand the moment she awakened. Even St. Mathew was back from Vegas.

She tried to Link him a greeting but found that either the Link was muddled by the medication or it had faded without renewal.

"You stopped them," Wolf told her. "You got a hell of a tan, but you stopped them. I directed a rescue team to you, and that Lexington guy managed to take them out and get you to a decon station. The geothermal plant will be running at half capacity for the next few months, but you kept it from burning up half the city. You're a big busting hero!"

Pat nodded and felt a sharp pain in her side where her attacker had placed his foot.

"H— how bad?" she asked.

St. Mathew answered. "The doctors say you'll be up in a few more days. You took a lot of smoke and radiation. The smoke is gone, and they're running scrubbers through your system every four hours. Want to hear about my trip to Vegas?"

"Did you — find any. . . ?"

"Crusher Cloud was gone by the time I got there, but I met one of his cohorts. These are very strange people we're dealing with, Doc. The word is the NeoNazis, or whoever, are poised for a majority influence of Earth's Political Council, and the one I met was definitely associated with Weave Corp."

A sudden thought came to Pat. She searched Chico's and Wolf's eyes. "Tax audit?"

St. Mathew held up a folder of high-denomination credits. "In appreciation of your services, BSI has offered to pay our back taxes. Besides, I picked up a little loose cash in Vegas," he smiled. There must have been over fifty thousand credits in the folder.

"Stolen?" she queried.

He laughed. "Call it a loan. From Weave Corp."

"Replitropic!" Wolf exclaimed, slapping the other man hard on the shoulder. Chico looked at Wolf, questioningly.

Pat was beginning to tire. "Have Arthur pay them direct immediately . . . into the Gov's account."

Chico nodded. "He's scheduled to come by later for a police report."

A doctor drifted past with a small MediVax and a MediCen name badge that identified him as Harold Custer. "Commander Emory," he said, "I think I've got some good news for you. We're not entirely certain, but we ran a lab report, and we think the radiation may have destroyed the virus on one of your ovaries."

Pat's heart slammed in her chest. Oh God, the mu-mesons, the radiation treatment Selena had cautioned her about. It was working! I'm no longer a sterile old rock.

"You understand, it's not conclusive," the doctor said. "But we've been in contact with your doctor on Ceres, who advises that just this sort of treatment was what she had been considering, so you've come through all of this with a bonus. However, I must advise you to keep calm and let the treatment run its course."

Another question burned in Pat's mind. "What about the other virus, the Link?" she asked, hesitantly. "Will it have any deleterious effects on me?"

The doctor consulted a readout on his wrist. "It seems to have faded normally, leaving you with no lingering or residual —"

But Pat couldn't hear him. Chico was hugging her, and Wolf reached out to comfort Chico, and suddenly, they were all holding each other. So, Pat thought, feeling the joy of her teammates all around her, the Link is harmless to my system and there never really was anything to my *idée fixe*, after all.

But the thought that pleased her the most as she drifted into a warm and comfortable sleep was that, at last, she could bear her own children. *

VISIT TO TRENDY TERRA: 2290

Anticipating fine reception,
Came an earthbound delegation,
Replete in splendid uniform
Adorned with garments from each nation.

Most unfortunate their timing,
Deceived by garb light-years ago —
They thought that by our tastes combining
Fashions past were apropos.

Out of mode from node to node,
The Terran vogue was quite a blow;
For all our diplomatic crew
Stood there naked, head to toe.

Before the meeting ever started,
The blushing aliens departed.

— Marge Simon

PARTNERS
by C. Herb Williams
art: Brad W. Foster



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After making his living for nearly twenty years as a free-lance photojournalist, C. Herb Williams says he is experiencing a mid-life crisis, one that has caused him to focus his creative energies on writing fiction. His first SF story sale was to If in 1954, and after a long gap, he sold another tale to The Magazine of Fantasy & Science Fiction in 1980. This is the author's first appearance in Amazing® Stories.

Hawkman Clinter was strangling under ten feet of water. He fought back the waves of constriction rising from the depths of his throat, commanding him to cough. Currents far stronger than his powerful muscles were carrying him ever deeper. He had taken some of that icy water down the wrong way when the sudden flood washed him into what these damned Lordahars called their Pool of Emergence.

Under anything like normal conditions, he needed only take a deep breath, or pause for a brief moment of silent concentration, to place himself in that area of suggestibility in which he could override his body's involuntary responses to cough, to gasp for air.

He had the luxury of neither now, as powerful, effervescent currents tumbled him like a pebble in a flood, confusing his sense of up and down. He closed his eyes to shut out all those extraneous impulses, to fight off the spasms in his throat, but lost his concentration when the thrashing knee of his partner caught him in the stomach.

Calling on all of his extensive Faculty training, he finally shut it all out and triggered the control that let him override the panic orders of his body's involuntary system.

In control of his mind and body now, he knew he had enough air in his protesting lungs for perhaps sixty seconds. Millions of bubbles swirled around him, reflecting light that seemed to come from all directions. He located the small circle of light that told him that way was up to the surface and life-giving air. He gave a powerful kick but gained nothing, because he was face to face with Steelana, their wrists lashed together in that fiendish knot known to these weird Lordahars as their Knot of Enlightenment.

She was fighting just as hard and pulling him down. Couldn't she tell which way was up? She'd had the same Faculty training, and after the first shock of the icy water should have regained her control just as he had done.

Then he saw the problem. He was on his back, looking up toward that small circle of light that was steadily growing smaller and dimmer. She was on top of him, looking down, confused by the shimmering bubbles and the buffeting of all the other wrist-bound pairs thrashing wildly in these roiling currents.

He jerked hard with his right hand, trying to turn her face toward the surface. He failed because she was fighting to move their bound hands in a different direction. Then the current rolled them over, and he knew by her sudden pause that she had finally seen which way was up.

She immediately gave a powerful kick toward the surface, and her knee slammed into his stomach again. Precious air exploded from his mouth. Panic surged out of his involuntary system, and his control slipped. For a moment he kicked wildly, trying to swim, but bound as they were, they only cancelled each other's efforts.

He forced his mind and body to be quiet. It was harder this time, and even when he gained control once more, terror lurked at the edge of his mind, for

that blow had cut his time down to less than thirty seconds.

For the first time he believed that he might die, drowning in this maelstrom of thrashing, struggling people tied together in some insane rite of passage on this backwater planet Lordahar. The pressure for more air was growing stronger with each second; his lungs felt as if they would burst.

"Learn their secret," the Faculty had ordered. So he and Steelana Galvin, both first-level graduates of the galaxy's highest Psychological and Physical Survival Training, had come here in the guise of export-import traders. "Bring back the secret of the Lordahar's legendary ability, and nothing can stop us," they had been told.

Some rumors said their secret was a "circadian tea," a locally grown drug that let them thrive on a planet that revolved in an elliptical orbit complicated by an axial wobble. The result was a day that varied, according to the seasons, from twenty-one to thirty-nine hours long.

Those vacillating hours didn't bother the planet's two races, the Shangosh and Phaaron, even though both had sprung from Earth with its eons-evolved circadian rhythm of approximately twenty-four hours. Not so for almost all others who had originated on Earth.

That was why he and Steelana were here: seeking a solution to the biggest problem humanity faced following its explosion into the galaxy with the development of the Darp Warp Drive. That problem was not indigestible plants, deadly bacteria, predatory animals, or alien races already in place. It was the simple problem of getting a good night's sleep.

The old familiar twenty-four-hour day was the exception on newly discovered planets whose flora and fauna were within a range humans could handle. A minor problem, most thought in the first excitement and challenge of the new worlds to explore, exploit, or colonize. But then, the growing network of human civilization deteriorated.

A natural obstacle to interstellar government of any kind was distance. Even with the Drive, time between some planets was measured in months. That could have been handled, but adjustment to a staggering variety of day lengths proved to be the proverbial straw as humanity succumbed to irritability, sleeplessness, and various physical or psychosomatic ailments. "Like a permanent case of jet lag," the saying went.

Innovative work-sleep schedules failed. Entire cities enclosed within a twenty-four-hour cycle of light and dark helped within limits, but when people stepped out of that artificial environment, as they found they had to do, disorientation struck. Hypnosis, meditation, and varying psychic efforts also fell short of eliminating the pressure of humanity's circadian heritage. Drugs over a long time span had their deleterious side effects. All these had failed to one degree or another.

Minor frictions within a single world's population or among the inhabitants of various planets led eventually to border-type skirmishes that esca-

lated into wars, big and little. Rogue ships, or entire rogue planets like the pirates of Earth's old sailing days, moved into this vacuum, and humanity's budding civilization collapsed.

Then rumors began filtering out into the more heavily populated sections that the people of a planet called Lordahar had solved the circadian problem.

Hawk fought the pain in his head that threatened his conditioning. His lungs felt as if they would explode as Steelana fought every move he tried. If only the rumored circadian tea had been a fact, they could have made a deal and been gone.

"Only a rumor," his Phaaron contact Bruna had told him bluntly. Bruna stood six feet tall, nearly looking him in the eye. Broad of buttock, large of breast, and her classic features framed by flowing blond hair, she was more like an ancient Nordic goddess, Hawk thought. She would be more at home swinging a battle axe than as one of the possessors of the secret of living at peace in a galaxy where all others suffered circadian malaise.

Hawk looked from Bruna to her assistant, Moodaher, who bowed and smiled, saying yes, that was so, although they did have some flavorful teas that might be traded for the condiments and spices Hawk and Steelana had brought.

Moodaher also stood about six feet, but was the opposite of Bruna in just about every other way. He was small-boned, thin, with dark hair, dark skin, and a slant to his eyes. He spoke softly, with apologies, deferring as a member of the Shangosh race to what Hawk saw was the obviously dominant Phaaron.

"We could use some of your robotic technology," Bruna said, as they toured industrial sites. "We lost much of ours in the Collapse."

"Yes," Steelana agreed, "but what a marvelous job you're doing with your environment!"

Hawk recognized Steelana's gentle probing for their secret. The cities were clean. Structures both large and small were built with sound-baffling construction instead of gleaming, noise-reflecting surfaces of shiny glass, steel, or long-enduring synthetics. "It must be more than design to make everything so quiet," Hawk said.

"You are perceptive," Moodaher said with a bow. "Those various colored panels are one of our successes. They catch sound, deaden it."

"You have a lot less noise to absorb — your ground vehicles barely whisper."

"Not without its cost. Special tire treads help them run quietly, and heavy shielding silences the whine of the electric motors. These and other things help give us peace and quiet, help us sleep soundly, get the rest we need."

Hawk felt his pulse quicken. This simple man was talking freely about

what they had come to find. "We could use some of your technology in that field," he said with a laugh. "A good night's sleep is not easy to find on many planets."

Sleep. How easy it would be to let go now and simply drift to the bottom. It was one thing to control his involuntary reflexes, but not even one with the often strenuous training of the Faculty could get along without oxygen, and his bursting lungs were calling on him to open his mouth, to suck in much-needed air. He was stronger than Steelana, outweighed her by some fifty pounds, and thus could force her to the surface. But he knew his time was running out, for his vision was starting to dim as his body consumed its oxygen.

Then he saw a solution. He relaxed and let Steelana lead. In moments they broke the surface, but he wasn't able to draw in the great gulps of air he needed, for other struggling pairs crashed into them, forcing his head back underwater. They surfaced again, barely long enough for one hasty gulp before the powerful currents pulled them back toward the bottom. His Faculty training had never prepared him for anything like this, and he felt a moment of anger at those grim men and women who had supervised his training.

The Faculty. The euphemism they had adopted for a sometimes brutal organization in a brutal galaxy. SURVIVE TO SURVIVE was its motto. Whispered rumors placed its origins in one of the first plundering rogue planets following the Collapse. Whatever its beginning, the rise of one or more such groups was inevitable, as determined men and women fought to bring order out of chaos.

During Hawk's years of training, vagrant questions about the true goals of the Faculty or what it would be like to live forever under the rule of such people had come unbidden to his mind. They often came in the small hours of the night during brief interludes that followed especially grueling training courses. He had forced them out of his mind as unworthy of one who had been selected for such vital work.

But during these weeks immersed in the peaceful Lordahar environment, he had come to realize that ambitious Faculty leaders saw the interstellar chaos not as a problem. They looked on it as an opportunity for those smart enough to solve the circadian problem and then strong enough to seize power. But even that unspoken goal would be better than what humanity endured now. At least that's the viewpoint he had unthinkingly accepted as he gloried in his superior powers of mind and body. He and Steelana were superior and knew it. They were on the cutting edge of the battle to bring order to the galaxy.

He was convinced now that the secret to that lifesaving order might lie with the Shangosh and Phaaron. These two different races not only coexisted in perfect harmony with each other, they also thrived despite conflict

between the heritage of their Earth-based circadian rhythms and the wild swings of light and dark on their planet.

The Faculty had honed Hawk and Steelana into the ultimate human weapons, drilling physical and mental control into them on the training planet. Survivors called it the gladiator pit. Hawk knew the martial arts, could bench press four times his weight, had the quickness of a rapier expert. His memory was close to being mnemonic.

Steelana, despite a deceptive appearance of feminine softness in her willow body, could lift his 225 pounds easily over her head or relax those fine-toned muscles and pass for a lovely, sensitive woman. She could also become a tigress in the bed of some unsuspecting male or female she wanted to control.

Despite his training, Hawk was losing. Letting Steelana lead had not worked. Each time they either worked to the surface or were thrust upward by the currents, he got just enough air to postpone the end. Bound by that insidious knot, only one of them at a time could get a mouth above water before being sucked below by the currents or battered there by other thrashing couples, all of them combinations of one powerfully built Phaaron like Bruna and the other the slightly built Shangosh like Moodaher.

The tiny circle of light at the surface was almost invisible. They were near the bottom of this fiendish pool, and he had one last option: he triggered the panic system in his body, activating that three percent of his pituitary gland that released cortisol into his adrenals, giving him that hundred-fold strength that over the millennia had let ordinary humans perform astonishing physical feats when under extreme stress.

He felt the power surge into his body. Hawk kicked hard, trying to drag Steelana with him to the surface, where he could claw his way to shore past the dozens of other thrashing pairs. But it did no good. He felt a reaction of tremendous strength from Steelana and knew she had triggered the same reflexes in her body. He should have expected it, with training identical to his. He would die now for sure because his body was consuming oxygen at a prodigious rate to match the energy he was getting from his muscles.

Steelana would die, too. He would never know if the sensitive, caring side of her he had glimpsed here on Lordahar was really her underlying character or simply his imagination. But in this moment of clarity as he was about to die, he knew that if it was an illusion, it sprang from what he had wanted all his life.

All his life. Faculty scouts had recognized him early as exceptional and had recruited him just as he was entering puberty. He had known women only as part of his training.

Regularly, the killer-paced regimen gave way to orgies as strong and healthy young men and women sought release. Those wild eating, drinking, and sexual interludes were also part of the training, for out of them came

sexual skill and prowess and knowledge of how to handle alcohol, drugs, and food. Some failed in this phase of the training. Those who could control it had still more weapons in their human arsenal.

He and Steelana had come together with that same fierce intensity in their first days on Lordahar. Then their relationship began to change. He began to sense something different in her, feel it in himself. Subtle at first, unfamiliar to ones with their carefully controlled experience, it grew stronger. For the first time in his life he examined those questions about some of the Faculty's methods and goals that he had subdued before. He had not dared speak them aloud. Now, recalling that faraway look on Steelana's face when she didn't think he was watching, he was sure she had been thinking similar things.

Thinking. It was getting hard to think, yet his mind was still clear enough to recognize the first stages of hypothermia as the icy water also took its toll. He knew his oxygen-starved blood was leaving his extremities, his brain, because his mind was playing tricks on him. It seemed that Steelana was stronger.

Perhaps she was, not in physical strength, but in endurance. Women were the ones who endured childbirth, gave of themselves for their offspring. Males were stronger for shorter bursts of energy to defend the cave, kill the wild carnivores. No Faculty training could change that.

If only they hadn't picked up rumors of some rite of puberty. They had stood off in the distance from those temples, or whatever the Lordahar called them, as they tried to understand the children. For in contrast to the adults, the children were irritable, argumentative, always fighting.

"They *do* have something that changes them," Steelana said. "It helps those poor children."

He had looked at her as if seeing her for the first time. They were on the verge of discovering the secret of the Lordahar, and she had thought instead of how that helped the children. He felt a sudden warmth toward this woman whom he had known only in sexual release or as a disciplined Faculty agent. Her suddenly revealed compassion echoed similar but unfamiliar emotions he had begun to recognize in himself. He caught himself wondering what kind of children he and Steelana might have. Irrational anger followed that thought, for he knew the Faculty never allowed such luxury for agents such as Steelana.

He thrust those thoughts aside and stood by her as they picked up some sort of catechismal classes with their multi-dimensional microphones. Words such as enlightenment, emergence, understanding, heritage, and deliverance strengthened their belief that they were close to learning the secret.

Following a procession of adults and pubescent youth to a huge cave in

the hills above the city had been their big mistake. From their hiding place they heard dark-skinned Shangosh elders telling the suddenly quiet children their deliverance was near, while the normally physically dominant Phaaron adults looked on with what had to be deference.

They thought they were unnoticed, but Moodaher stepped from the shadows. "Welcome. We have no secrets, from the Faculty or anyone else."

"You knew all along?" Hawk asked.

"Not at first," Moodaher said, "but it became obvious after a few weeks. But come. More of that later. You can take part. Learn our secret, which in a way is as old as humanity."

The hundreds of children began chanting, circling, touching, humming, hands held up together, boy with girl, Shangosh with Phaaron. He and Steelana held up their hands in the same way.

They were bound face to face with that insidious Knot of Enlightenment. Then a sudden roaring filled the cave, and tons of water cascaded from above, sweeping them into the Pool of Emergence.

Emergence. There was only death. He had tried to kill Steelana on that last rise to the surface, to survive at all costs. In a moment of insight he despised himself, for she was the one who should survive. She was the one who could give life, could propagate others, could pass on her strength to children, who eventually could solve the galaxy's problems without having it controlled by those relentless instructors he now saw as power-hungry despots with the zeal of the self-anointed.

His arms and legs were like weights. She indeed was outlasting him, with that endurance nature had given women. But he knew by her movements that she too was near death. He felt them rising once more to the surface and knew that he held her life in his hands. He quit struggling, reached out with his mind in a final effort to coordinate his movements with hers, using his last strength to help her to the surface.

A harmony he had never known before flooded through him as he coordinated his hands, his legs, his entire body with hers to help her to the surface.

Even more, he felt their *minds* touch in a way he had never thought possible. It was just as real as this touching with their bodies, and even more ecstatic.

As blackness closed in, his last sensation was that her struggling had changed. It was as if she were helping him to the surface and life-giving air, instead of accepting his help so she could live.

He was lying on a rocky bank, breathing — breathing air. He opened his eyes. Moodaher and Bruna were crouched over him.

He looked at his wrists. They were red and chafed, but the knot was gone.

"Steelana?" he asked, his voice weak.

"Here," came her voice. It too was faint.

He turned toward her. She also was lying on the rocky bank, raw wounds on her wrists. "You made it, saved us," he said. "But how?"

Moodaher chuckled. "No, both of you."

"Oh?"

"It has its parallel in your triggering your adrenals."

"My god, Moodaher, you knew that, too?"

"It happens to nearly all, although in most it's involuntary. But more of that later. You see, we have discovered an additional trigger. In the many yet unexplored corners of our brains and glands lie those traces of hormones that control our circadian rhythm.

"This sudden and drastic change in the length of our days is a spur, keeping humanity stirred up, with no rest. Just as changing climates on ancient Earth spurred our pre-human ancestors, so this is forcing us to adapt, to develop latent forces within ourselves or die."

"You've adapted," Steelana said. "How?"

"Just the way you did."

"We did?" Hawk asked.

"Yes. Just as extreme stress triggers the release of superhuman physical strength, so the extreme stress of two people joined irrevocably together in the trauma of that most fearful of dangers — of not being able to breathe — sets up a sequence in their minds and bodies that we still don't understand."

"But they're all children," Steelana said, looking around at the pairs of young Shangosh and Phaaron who were sitting up, looking around, their expressions peaceful now like the Lordahar adults.

"This latent force develops with puberty, so it's truly a rite of passage as you thought," Moodaher said.

Steelana's hand went to her mouth. "Do . . . all . . . make it?"

"Our ancestors were harsh in the strict way that helped this selection process," Bruna said, her lips a straight line, "so we seldom lose anyone now." Her grim look vanished and she smiled. "We're getting close to prediction now, so we can give those without the latent power a chance to go elsewhere."

"So we finally have the secret," Hawk said.

"Not completely," Moodaher said, his voice almost a whisper. "In that trauma, each of you finally decided to let the other live, and that finished the breakthrough." He chuckled. "You both felt it, right?"

Hawk reached out for Steelana's hand, which met his halfway. He looked into her eyes and knew she had also met his mind halfway. They did not share each other's actual thoughts, but now he felt that same sharing of emotions that had washed over him in those last moments in the Pool of Emergence.

"Is that how you knew so much about us?" Hawk asked.

"We can't read minds, if that's what you mean," Bruna laughed, "but the blossoming of this latent power also increases many times the normal hu-

man ability to sense emotions. Who you were became evident to us quite quickly."

Hawk looked around at the children, who were beginning to get up, laughing, playing. He glanced at Steelana, saw that she too was watching them. The thought flashed through his mind that with her now he could father healthy, happy children, that he *would* father them, regardless of the Faculty. The immediate pressure of her hand on his told him that she had sensed his thoughts and agreed.

"I think we felt something else, too," he said, looking at Bruna and Moodaher.

"But doesn't the Faculty forbid children for such as you two?" Bruna asked.

"Do you people know *everything*?" Steelana asked.

Moodaher chuckled. "It's been generations since adults swam in the Pool of Emergence, but we are told the reaction is predictable."

Then a frown flitted across his normally peaceful face. "I had much opposition in giving you the chance to learn. Some of us fear that Faculty power-seekers might try to corrupt this for use as a weapon."

Hawk and Steelana laughed as one.

"The Faculty?" Hawk asked. "How will they ever know about it?"

"Ah, the Faculty," Steelana added. "We think we'll let them continue having sleepless nights." •

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A PAINTING LESSON
by Nina Kiriki Hoffman
art: George Barr



Nina Kiriki Hoffman informs us that she just became a Big Sister through the Big Brother/Big Sister program and that she's having a great time finding out what an eleven-year-old thinks about the state of the world.

*Her short stories have appeared in Amazing® Stories,
Pulphouse, and Weird Tales.*

Magda Thorne, flat on her back on the floor, raised her head and peered between the upturned toes of her green lizard-skin high heels. She saw three pairs of paint-splattered jeans, with knees at varying heights. Her head hurt. She bumped her head back down on the floor and rubbed her eyes. She glanced at her fingernails and discovered they were painted bright red. She frowned. "What happened?" She shielded her eyes from the modeling lights fixed to the ceiling and glanced at the knees again.

The girl knelt. Hazel eyes in a clean young face framed by short, light curls. I recognize her: Haley, Magda thought, one of my fourteen-year-olds, but which class is this? The normal painting class or the sorcerous one? If Magda treated her normal class as if they were sorcerers in training, it would be a big mistake. Better stick to normal, no matter what. And what had happened to her mind? Where was its accustomed clarity? She wasn't used to this confusion.

"You were modeling," said Haley, "for ten-second sketches."

"And you whirled," said Roger. He had the tallest pair of knees. The poster-paint spots on his jeans were mostly red and green. His thin face wore a worried frown behind his black-framed glasses.

"And you looked out the window and got this horrified expression," Haley said. "I think Todd caught it pretty well."

Todd's jeans walked away.

"Then you threw your hands in the air and yelled 'allyskidoo' or something and fell to the ground," said Roger.

Todd came back, knelt beside Magda, and offered her a glass of water.

Magda sat up. She took the water from Todd's broad hand — he was short, dark, and square, and his hands looked too big for him — and sipped. She glanced down at what she was wearing: a crinkle-cotton yellow dress and a purple silk sash. "Class," she said, "I don't remember what was going on. Allyskidoo, Roger? Could I have said aliakadashi?"

"I guess so," said Roger.

"That was it," Todd said, nodding.

"Oh, dear." Magda felt the first prickles of panic brushing her spine. "That means — a hopper must have followed me home."

"What?" said Roger.

"They must be able to trace . . ." She rose to her feet, went to the art benches, and studied the three newsprint sketch pads.

Todd had caught her: wide eyes and open mouth slapped down in magenta, an upraised shock of blue and black hair sizzling around the features, emitting yellow sparks.

Haley had the whirl, the swish of the skirt, the hands thrown skyward into witch claws. The head was just a black blob. Haley always concentrated on body language.

Roger had done her sprawled, and he left out Magda, painting only green shoes, yellow dress, purple sash, and red fingernails.

For a moment she forgot the emergency. "This is the best work you've ever done, class," she said. It was hurried work, and there was power in the slap and dash of it. "I ought to faint more often."

"Mrs. Thorne," Todd said. "What's a hopper?"

"Oh," said Magda. "The shadow hoppers. Oh, dear. I didn't know they could follow me." She looked at her students, their shadows strong black splashes on the floor as the bright light she used for modeling shone on their strong young faces and sharp-edged the folds and wrinkles of their clothes. "You'd better get out of here," she said. How could she save them? The shadow hoppers had appeared without warning near the sorcerers' retreat in the northern Canadian wilderness, and no one had figured out how to deal with them yet. Some of the spells that worked to counter curses held the hoppers at bay for a little while, but no one had found a way to banish or destroy them. Knowing that her class would be arriving at her house — and yes, it was her normal class, she realized; she taught the sorcerers-in-training at the retreat — she had fled by magical means to her home in the woods above Santa Barbara, intending to teach her class and then go back.

"How can we leave?" Haley asked, her forehead pinching in a frown.

"Class just started, Mrs. Thorne. Haley's mom won't be here to pick us up for another hour and a half," said Roger. He glanced out the window at the oak forest. Magda didn't like the psychic climate in town; her studio was ten miles out in the country.

"These things are very dangerous," she said. She opened her hands and looked at her palms. Only a faint power pulse left — she must have used up most of her reserves casting the warding spell; Haley had captured her best spell-casting pose in poster paint.

"What's a shadow hopper?" Todd asked.

"It's an invisible thing," Magda said. She fisted her hands. She had told the others she had to come home and leave them to their planning session because she couldn't desert her students. Now she didn't have the power left to get her students out of danger, and even if she could send them somewhere else, that was no guarantee of safety. If the hoppers could follow her home, they must be able to follow power traces. She took a deep breath. "It's some kind of thing that hops from one shadow to the next, mostly the shadows of live things, and when it jumps on your shadow, somehow it sucks up an important part of you. I don't know how to fight them. I think we'd better leave."

"Couldn't it get us just as easily outside?" Todd asked.

"What is all this?" Roger said. "This is just a trick to scare us, isn't it? You always tell us emotion makes great art if we have the technique to shape it. You told us to watch horror movies and romances and draw while we're watching. This is some kind of gag, isn't it?"

The cat yowled from somewhere back in the house, far from the studio. Its scream went on and on.

Haley gripped Magda's arm. "Mrs. Thorne —"

The cat's scream lowered to a moan, but it was getting closer. "It's riding the cat's shadow," Magda said. "Go outside, children."

Todd grabbed the black can of paint off his tray, stepped into the center of the light, and spilled paint across the linoleum. "Paint's a shadow," he said.

"What?" said Roger.

Magda looked at the sprawled blot Todd had made. Todd stirred it with his fingers, spreading it out in swashes across the floor. "Paint's a shadow, and maybe this one'll taste like me. But it won't be attached. Do you think that will help?" He slapped the black paint with open hands and made hand prints around the edge of his blot.

Magda went to the supply cupboard and pulled down the stack of giant newsprint tablets. She got down jars, unscrewing the lids and releasing the wet-dust smell of poster paint. "Yes, Todd," she said. "Yes. I think you've got something." She set open jars of paint all over the mat-board cutting table. She opened a newsprint pad and dipped her fingers in red paint. "Children," she said, stroking the thick paint onto the rough paper, "Paint. Paint or run. If you leave, I'll do my best to distract the thing, as long as I can."

"But —" said Roger.

The cat's moans were coming down the hall now.

Haley grabbed a newsprint pad and poured yellow paint on a page, then scraped it out with the heel of her hand. Todd lifted a jar of green and dipped his fingers in it. Roger stood a moment, then snagged a jar of powder blue and spattered it across a page with flicks of his fingers.

The cat, silent now, trotted into the room. It looked like any cat, all fur and purpose. It paused when its shadow met Todd's black lake. Then the cat collapsed. Roger moaned. The imprints of many tiny, clawed bird feet skittered across the paint, spreading out to cover the whole shadow. Little splashy noises came from the paint as something wallowed in it. Then it rolled.

"Cripes!" said Haley as a black blob raised itself from the floor, leaving the linoleum spotless.

Todd ripped the top sheet off his pad and skimmed it toward the creature. The fluctuating black shape leapt and landed on the green-spattered page before it hit the floor. Haley tossed her top sheet after Todd's.

"It's visible," said Magda. "Visible. It's casting a shadow . . . students, paint that thing." It soaked up Todd's green and chased over to squat on the sheet Haley had thrown. Todd's breathing was loud in the room. "Paint a picture of it, catch the shadow of its reality. Use brushes! Don't give it any more of yourselves. Let's give it its own shadow to eat." She threw down her first three finger paintings. Adrenaline pumped through her. She knew fright would augment her returning power, so she let her fear for her students grow in her mind.

The hopper went from one of her paintings to the next. She felt vagueness

drifting into her; she had trouble focusing on the thing and capturing its likeness. Todd had slowed, too.

Haley and Roger were using fat brushes now, painting with any color they could reach, tossing pictures out. Roger moaned under his breath. "Oh, no. Oh, no. Oh, no." As the creature jumped from painting to painting, picking up colors as it went, Magda straightened out of her wilt. Haley and Roger were doing it. Each painting they sent to the hopper looked more like its revealed shape, and the hopper was slowing, its shifty blob settling into a spiky shape with fewer deviations, making it easier to paint. Todd perked up and painted too.

"My god, we're killing it," Haley said, her voice full of murderous glee.

Magda gripped the table and watched the sketches, seeing how each of her students painted different things about the hopper: Roger its shape, Haley the spikes of it, Todd its wiggliness against a background of scattered paper, pinning it under the modeling light by not painting it any closer to where the students were. Magda summoned her power and tossed off three sketches of its essence, purple-brown and tentacular, so that she and her students would catch as many different facets of it as they could. The hopper made little sucking noises as it rolled over the last of her pictures. It was definitely slowing.

"Make it smaller," Roger said. He painted it the size of a watermelon, limiting it to half a page, and threw that painting to it. The hopper absorbed its new self — and shrank. It meeped.

Haley drew it down to a beach ball. Todd shrank it to tennis-ball size. Magda gave it the tiniest soul she could imagine, still brownish purple, a mere dot in the center of the page. It absorbed each image in turn, transforming, as if helpless not to become what it observed.

Roger threw out a blank page.

The hopper, now the size of a grape, rolled across it, searching for sustenance. Finding none, it ranged past the edge of the paper and rolled into the shadow of the collapsed cat. Immediately it bulked up again, though only to the size and shape of a football.

Roger painted a football for it.

The hopper became more football-like. It no longer possessed feet, but rolled awkwardly about, first around one end, then the other.

Magda reached for a color and found herself holding the gold she used to paint halos and wings and a star every year for the Country School Christmas Pageant. She painted a gold coin, a small one, on a page and tossed it out. The football oblonged its way over, perched on the coin a moment, absorbed it, and sat, small and motionless now.

"What?" said Haley. "What'd you do, Mrs. Thorne?"

"I painted money," Magda said. "Money doesn't move by itself. It only moves if people move it."

Roger left his bench and went over to stare at the transformed hopper.

"No!" Magda cried, but he had already leaned forward, casting his shadow across the gold coin, which cracked and grew, the colors stretching and fading as the shadow hopper found its true food. Roger moaned and turned away. His hands shook. His face paled. He took two shaky steps and folded to the ground. The hopper, with ghostlike streaks of poster paint still patching its outlines and some of Magda's purple-brown coiled in its center, squatted on Roger's narrowed shadow.

"Oh," said Haley. She rose and hovered, wanting to go to Roger but not daring to. "Oh, Roger."

"We almost had it," Todd said miserably.

Magda held a brush in each hand. She looked at Roger's slumped, empty body and felt fear and despair fill her. "Shadows," she murmured. "Shadows of live things. Shadows of what it was. Shadows of what it might be. What does it need? Powers and prayers be with me." She closed her eyes, summoning whatever she could. The room was quiet except for Haley's little moans. Magda heard paper shift against other paper, a tearing sound, and a light riffle like a book closing. She felt power pooling in her hands, felt her grasp on the brushes tighten. She opened her eyes to see the hopper move out of Roger's limp shadow to roost on another of Todd's paintings, an evil black scrawl that looked like anger laid flat and pinned down. Large now as a Labrador Retriever, the hopper swallowed in Todd's anger and rose with fresh black streaks brindling it.

"No!" Magda said. "No. Don't feed it anything that makes it stronger." She blinked. She remembered the hopper riding the cat's shadow and wondered why it hadn't animated Roger. Perhaps Todd had separated it from Roger's shadow before it could understand him enough to walk him over to them where it could feast on their shadows — outside the range of the modeling lights, their shadows were not so sharp, even with the lights above that let them see what they were painting. Magda's right hand reached out and dipped a brush in pink, her left hand reached for yellow. Her hands, together, sketched delicate whorls and squiggles on the paper. She felt the power in her hands as it flowed through, shaping her strokes into something unnatural, a gentleness she had never considered artistic — if a work didn't strike her, cry to her for attention, force her to feel something, she didn't believe in it. Watching the painting take shape under her hands — pale green leaves twining around the edges, small lavender flowers blooming here and there, tiny gold butterflies kissed down like whispers — she realized that everything she knew was wrong.

The hopper came toward them, bristling with Todd's anger. She pulled her painting off the pad and tossed it.

The hopper landed in the painted field, crouching among the flowers. It sat for a long time.

"What?" Todd said, staring at her with haunted eyes. "What?"

Magda opened one of the watercolor sets, not the expensive kind with

tubes of paint, but one of the ones with little cakes of many colors. "I don't understand it," she said as she sloshed water across the colors to activate them, mixing red and orange and yellow, "but something in me knows to do it. Paint spring or summer, no focus, no composition." She let a wash of gentle colors flow off her brush.

Haley threw down a picture of clouds. The hopper stayed a while longer in the garden. Magda stared at it, noticing that inside its paint-powdered skin, it now hosted a clump of violets, with butterflies shimmering above the open flowers. They looked more real than they had when she painted them.

In the north, she had seen grass wilt as shadow hoppers roved over it, sucking the reality from its many shadows. She had seen trees die and rabbits lie senseless after the invasion.

The hoppers had invaded far from the retreat, and there was no art in the wilderness, only live things.

"Live things they make unreal, and unreal things," she said, "unreal things . . ."

The hopper edged over to Haley's picture of clouds, moving carefully, and still disturbing the butterflies inside itself so that they fluttered to its edges and beat gold dust out of their wings against its inside skin. It sat and absorbed the clouds, white puffs against a poster-paint blue sky. It was beginning to look cluttered.

Magda stared at the paper before her, to see what the power had led her to paint, and there was her yellow and orange cat, faint in watercolor, its green eyes pale washed almonds across the pulpy tan of the newsprint. She tore the page off and flew it toward the hopper. "Roger," she said. Maybe, maybe, if this worked, she could do something to bring back Roger. She caught her breath.

Todd looked at the picture of the cat. He jabbed his paintbrush into the black and started slopping paint onto his pad.

The hopper, moving even more slowly now that it was full of weather, inchéd over to the painted cat and hunkered down. Presently a cat shimmered inside it, and then there was a rampage: the clouds rained, the cat hissed and spat and struck out at drenched violets and butterflies and its whole existence. A fabulous claw pierced the hopper's side. The hopper shrieked its agony and deflated like a popped balloon. For a moment, all the images it had ingested continued to live, but then they, too, faded, the cat leaping to lie beside its collapsed counterpart.

"Not yet, not yet," Magda whispered. The cat had killed the hopper before she could do anything about Roger.

The live cat rose out of the shadow left by the painted cat. It yowled, ran to Magda, clawed her leg, and dashed from the room.

"You brought it back?" Todd asked, a mix of hope and wrath in his voice.
"I think I did. I think I brought it back."

"You brought it back and not Roger?" Haley cried. At last she ran to kneel beside Roger, pulling his arm close so she could seek his pulse. His joints were loose, his body drained. "He's still warm, a little. His heart's beating and he's still breathing," Haley said. She glared at Magda.

"I know," said Magda. "I made a mistake." She closed her eyes and felt the guilt inside, clawing at her the way the watercolor cat had clawed the hopper. Powers, why restore the cat and not the boy? She focused on the pain a long moment, then gave it a little cage. She needed resolve now, and planning. She stood up straight, reaching for power. "Listen. Paint now, paint everything you can remember about Roger, and I will too. It will take some work, because a person is much more complicated than a cat. But I think, if we get ready, maybe another hopper will come, or maybe I can arrange to summon one. There were a lot of them up north."

Todd showed her the picture on his pad. Roger's face, serious behind the black-framed glasses.

"Yes," said Magda. She rinsed out her brush, then mixed up a blue-green the color of Roger's soul and went to work. 

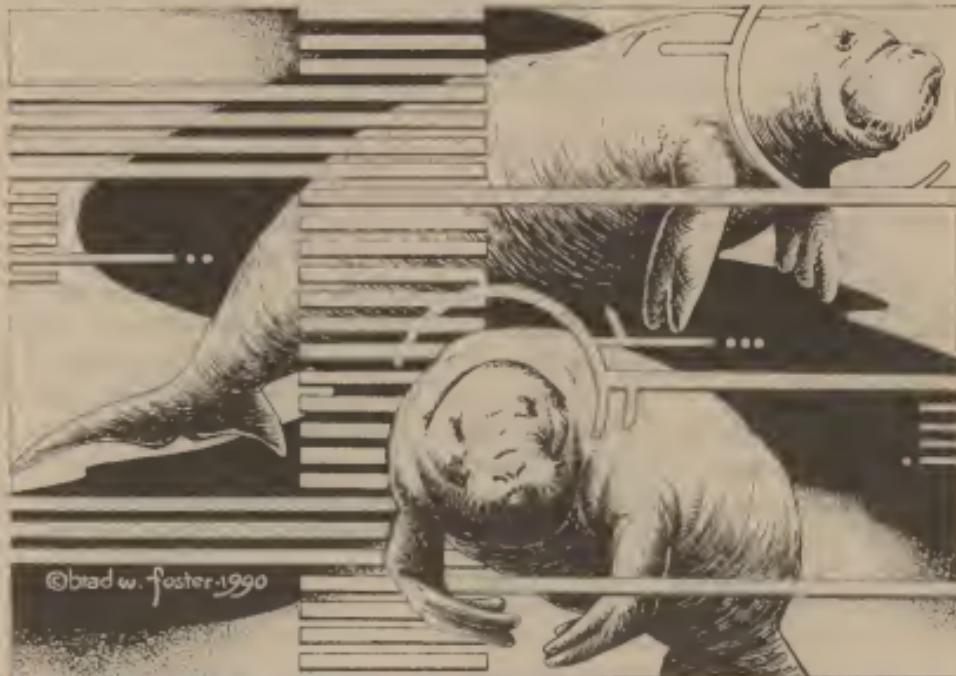
WOLFMAN IN THE WAX MUSEUM

It gets dark. Fences disappear, link
by link. Houses slip toward the black and white
of late-night TV when you've never
had color, but you see the blood red,
and the houses on that street Lon Chaney
runs down — breaking into a sweat, hair, lopé —
are from your neighborhood. It gets dark
and quiet. I touch tongue against teeth,
like the Wolfman, bright behind the glass.
Look and look away. He almost speaks —
as I squint him from wolf to man and stop,
as if seeing in living color for the first time;
the blood wakes, and he wants his sure body
back, or some touch, some answer,
and wails at the moon. Our faces flush
with that private turning — so sudden
it leaves only the transparent wax of memory.

— Dana Sonnenschein

LIFE IN A DROP OF POND WATER

by Bruce Bethke
art: Brad W. Foster



Bruce Bethke has sold short fiction to Aboriginal SF, Weird Tales, and Science Fiction Review. His novel *Maverick*, set in the world of Isaac Asimov's ROBOT CITY™, was published in August 1990.

His previous tales in Amazing® Stories include "Cyberpunk" (November 1983), "One Evening in H. G.'s Drawing Room (March 1986), "The Skanky Soul of Jimmy Twist" (May 1988), and "Elimination Round" (July 1989).

Shafts of long afternoon sunlight spear through the water, illuminating my world with a thousand delicate shades of green and amber. A school of gambusias glide past, oblivious to my presence, and shatter the sunlight into a glorious blizzard of mirror shards and sparkles. Floating just below the surface, I patiently wait for the minnows to leave, then return my watchful gaze to my tribe, as they browse among the sweet hyacinths and follow the weedy contours down into the safe, dark depths. My smiling face, the fixed expression of our kind, hides the scheming mind of a worried patriarch.

It does not help that my mind is haunted by distant and surreal memories of life on the land.

With no sense of urgency, I feel the need to breathe again and give my flukes a twitch. Face breaks surface: I draw deep, rasping breaths, the sunlight blinding my eyes, the raw air burning the delicate linings of my nostrils. Each time I break surface I hope that *this* is the time my instincts will drive me to submerge. And each time, I linger.

For here, at the surface, I can almost believe that I was once a human. For a few precious minutes, I can shrug aside the worries of a people and consider the colossal arrogance of one Dr. Eugene Meier, Professor of Mammalian Recombinetics, who so loved his creatures that he took their form upon himself and went down among them. And yet, not fully trusting his handiwork, he held back his truest self: When the memories get too strong, I must force myself to admit that I am not Eugene Meier and I have *never* been human. I am a thing of his construction: a modified manatee whose skull is threaded through with wires, filaments, and electronic pieces; a unique, living mind enslaved by his personality software construct. At some deep, primal level, I still remember life as an innocent beast, and I *resent* the fear and doubt that he has burned into my mind.

Still, if it did not augur such great danger for my people, I would find it amusing that the human who shares my memories now walks the shores of this pond, observing us and noting the details he wants to change in the next generation.

Surface disturbance near me. Blinking hard, I focus well enough to recognize the familiar face of Small One, popping up to snort a few quick breaths and have a look around. I have lingered too long. Driven by her wonderfully childlike curiosity, she's come up to see what I'm doing.

This prompts a return to the hard lesson I am trying to teach the tribe: *The surface is our enemy*. The ancient Seminoles hunted manatee and dried our flesh for jerky. The twentieth-century humans slaughtered us with boat propellers out of sheer carelessness. Sunlight dazzles our feeble eyes and makes us easy prey; we must surrender the surface to the humans, for now. Diving quickly, I wrap my stubby forepaws around Small One's flukes and drag her under. Angrily, she kicks free and torpedoes away to rejoin the others.

Trailing slow bubbles and old memories, I sink after her, once again dis-

comfited by the strange mix of feeling and memory that is my mind.

Small One is lithe and graceful, for my people. Seven feet from nose to tail, perhaps nine hundred pounds; despite my insistence on thinking of her as childlike, my primal self knows that she is a sexually mature female, just as it is excruciatingly aware that I am a male in my prime. Touching her warm, wet, leathery skin arouses me, and to the extent that I understand any of my people I know that I arouse her as well. Small One would gladly mate with me. Often.

But Eugene Meier, damn him, still remembers a slender blonde woman he loved twenty years ago! A *human* woman, with small, firm breasts and tight, dark nipples; a *dry-land* woman with separable thighs, and jointed arms long enough to reach around his back and rake sharp fingernails across the soft, ticklish skin. . . .

I glide through the water after Small One, once again studying her form and thinking of all the compromises that crafted it. The nearly human face — a grotesque joke on a body with no discernible neck or shoulders — modified for life as an aquatic vegetarian: her wide, flattened nose and mouth filled with large, square teeth; her beady inset eyes and complete absence of external ears. Rear Admiral Melba VanderSchaaf, director of the Navy Marine Mammal Research program, was ruthlessly efficient in her preliminary sketch for *seapersons*.

Dr. David Leiberman, still in drunken mourning for his beloved porpoises, could never get past the concept of *neo Tursiops*, the undersea soldier the bottlenose refused to be. His sole contribution to our project was the wide, graceful tail, yet thanks to him we should be able to swim quite fast in open water. I propose to test that soon.

The gift of the third magus? Dr. Gerhard Santino, arguing that "maiden" was the important root in the concept of *mermaids*, insisted that our females have shapely breasts and long, flowing hair. Eugene Meier thought it a bad idea but conceded the point; inside my head he now kicks himself, for on an elephantine body in a weightless environment large breasts quickly become pendulous and flabby. Our females have awkward hydrodynamics, and our hair has become a scraggly haven for parasites. If there were time for a design revision, I would fix that.

I? It is so easy to lose track sometimes, and forget the boundaries between his memories and my life. In the final splice that spawned the *man/atees*, Meier gave our foreflippers two prehensile digits and an opposable thumb. I can grasp a stick or a rock, but even if I did heave my twelve-hundred-pound body out of the pond, I'd have a bloody rough time handling lab glassware. Shape is determinative. How could I have been blind to that? Modify a sea cow's brain so that it is as intelligent as a human, and you end up with a frustrated sea cow.

An angry sea cow.

"Dr. Meier?" The underwater transducer squeaks out the thin, irritating

sound of a human voice. They call me by my slave-name, hoping to invoke duty and brotherhood. For now, I maintain the fiction and rise to the surface. Shaking the water out of my ear canals, I realize that it is Admiral VanderSchaaf who has summoned me.

"Yes, Melba?" It has taken me months to learn to form intelligible human speech with these mouth parts. We expected the man/atees to learn speech from a transducer?

"Any progress, Eugene?" she calls out. They have tried to hide Dr. Meier from me and pretend that I am he, but I have watched, and I know. The original still walks. I am a copy. I am an alien they hope to delude and exploit.

"Gene?" she prompts. I have not answered fast enough.

"No progress," I snort back at her. "There was no progress yesterday. There will be no progress tomorrow. There will be no progress next month!"

"You needn't get surly," she says, sounding hurt.

"Melba," I say in my best approximation of conciliatory, "they're still pre-verbal. Socially, they're like a troop of chimpanzees. Bright chimpanzees perhaps, but —"

"They have 1300 cc's of brain mass," she protests.

"That only gives them the *potential* to be human. Your mind is as much a cultural artifact as an organic one, Melba. It takes time to develop a culture. It took Cro-Magnon thirty-five thousand years."

"Cro-Magnon didn't have expert guidance."

Lucky Cro-Magnon! I think, but instead I say, "Melba, suppose Cro-Magnon *had* had guidance, but from a flock of intelligent pigeons. It's just that —" Abruptly, I catch myself. The gravest danger in talking to humans is that I will lead them to wonder how different we are. After all, it was the *success* of Project PorpoiseTalk that led to the renewed slaughter of the bottlenose. "It's that," I say, pretending to continue, "cultural paradigms created in sub-Saharan Africa are not exactly applicable here. As you no doubt expected." I attempt a chuckle; it sounds like a walrus clearing its throat.

A look of concern crosses Melba's face. "Is the job too big, Eugene? Because if it's a question of more assistance . . . ?"

My nostrils dilate with interest. Another human, willing to take on this flesh? Could it be true?

"We can put the scuba divers back in the pond."

No! I want to shout, for it has taken me six months to get the divers *out*.

Once again, Melba misinterprets my facial expression. "I'm sorry, Eugene. I know this must be disappointing for you. But the population is still too small. We really can't risk another memory transfer. Your translation cost us . . . , " she pauses, afraid that she has revealed too much already.

I close my eyes, and submerge. Memory implantation is a difficult and dangerous proposition at best. An interspecies implant . . . I have often won-

dered how many manatee brains the Navy burned out in trying to manufacture me.

I would rather not know.

"Eugene?" the underwater transducer squeaks.

I break surface and say, "Thanks for the offer, Melba, but no thanks. I have enough trouble getting their attention without divers in the pond."

"Are you sure? They seem to like us."

"They like frogs, too. Ever watch the young males play catch with a bullfrog? The game ends when both of the frog's hind legs are torn off. I'd hate to be a diver on the day when a half-ton of playful manatee starts thinking that divers are just big frogs."

Melba nods, "I see. Well, thanks for your input, Eugene. I'll be sure to explain your concerns at the staff meeting tomorrow. Bye." She turns and walks away.

I submerge, cursing softly. Eugene has worked for the Navy for over ten years. He *knows* that nod. Admiral VanderSchaaf has already made her decision, and the divers will be back within a matter of days.

It must be tonight.

My tail flukes brush pickerel weed; I have touched bottom. I pause a few seconds, to listen intently and discover where my tribe has gone. Then, with studied nonchalance, I swim off on the first leg of a twisted path that will take me to join them. I pause to watch a short-nosed gar swim past. I react as if startled when a catfish bursts up from the silty bottom.

I must not appear hurried.

Along the way, as I glide through my world of green and amber, I allow myself a moment of sad pride. The lie has lasted six months. Thanks to Leiberman's drunken incompetence, for six months we have kept our most vital secret carefully protected from the humans. I really shouldn't have expected to hide it much longer; this day had to come in time. As soon as Melba puts the divers back in the pond, she will find out.

My tribe is *not* pre-verbal.

Our language is a simple one, of hums, grunts, and other sounds that can be made with the mouth closed. Our most fluent speakers have perhaps the vocabulary of a three-year-old child.

This is as it should be. A language is the history of a culture, and it takes time to build a culture. My tribe has had barely five years.

I must make sure that they *have* the time.

Sometimes I wonder what the humans were thinking of when they created me. They expected me to solve the communication puzzle, that much I remember. But did they expect unquestioning loyalty? Did they think I would forget all the Navy regulations that demand our deaths if the experiment goes badly, or if funding is cut off? Eugene Meier was part of the committee that selected this site in southern Florida, and he helped supervise the construction of this pond. Did they think that I would forget the hours that he

spent studying maps of the Everglades?

Did they think I would forget that we were bred to be slaves?

Coasting through the golden water, I reach the algae-covered nylon-mesh fence that closes in one side of our pond and separates it from the seven hundred and fifty square miles of Lake Okeechobee. The tribe often gathers along the fence.

I told them to.

On the other side of the pond, a concrete shallow and a carbide gas noise-maker are intended to scare us away from the spillway leading into the Caloosahatchee Canal. For months we have worked to convince the humans that we *are* frightened. Tonight, it seems we must test our deception.

It's not easy, but we can drag ourselves through shallows. A loud bang is frightening only if you don't know it's coming. For months my young males have been studying the fence, searching for a weak point. If we breach the fence, and one of us goes into the lake and acts conspicuous while the rest crawl over the spillway, the humans could spend weeks searching Lake Okeechobee while the rest of us escape in the other direction. The Caloosahatchee Canal leads to the Caloosahatchee River; the river empties into the Gulf of Mexico.

If we make it that far, we are free.

Slowly, I have come to accept that I must not survive. My brain is partly electronic; I have no doubt that the humans can track me. I must be the one who stays behind.

And when the moment of certain capture comes, I must find the courage to throw myself into their propellers.

Because of this, I have spent months giving my people a myth to guide them. I have taught them the story of themselves, as much of it as they can understand. I have told them where they must go. Hiding among their non-sentient brethren, they must travel down the coast: first to the Ten Thousand Islands, then to the Keys, and ultimately to South America. The Amazon basin is the land of our forefathers. Even if it takes them generations, they must reach the upper Amazon. There they will be safe; I have promised them that.

I only hope it is true.

The long afternoon sunlight spears through the water, painting my prison with a thousand delicate shades of green and amber. I ignore the gumbusias sparkling like prisms and casually pass among my tribe, quietly giving orders. *Tonight. We must go tonight. The big frogs will come tomorrow.*

Turtle Back, a strong young bull, looks up and answers, *So? We can crush the big frogs.*

No. We must not hurt the big frogs. If we do, they will never stop chasing us. Turtle Back makes a frustrated click and goes back to grazing.

Suddenly, for just a moment, one of Eugene's memories surfaces, and I am stricken with the feeling of having legs. With the feeling comes a scene:

Eugene, Melba, and Gerhard Santino, in a bar in Clewiston, drinking shots of tequila on the night before Eugene's memory mapping. My last night with legs.

Santino was quite drunk and profane. "Y'know, Eugene," he said, "you're going to be like Jesus to those man/atees. For us, and for our salvation, he came down from the surface and was made man/atee. For the Secretary of the Navy so loved his man/atees that he gave his only begotten Professor of Mammalian Recombinetics —" Melba sputtered, and Gerhard began laughing like an idiot. So did Eugene.

Eugene, you *are* an idiot. And Gerhard, your theology is as sloppy as your design work. Forget the New Testament.

Let my people go!



ANCIENT LOVE

An old fire, a dark fire,
A cold pile of ashes,
Lives where my lover lives,
Blows when she passes.

Long I wandered on the moor,
Long I mourned my heart unmoved
Until one night I met her here
And without warning, I was loved.

She placed her chilled hand in mine
And I trembled at her touch,
For the taste of her cool lips I find,
I will relinquish much.

So I wait by the broken tower
Through night and day and night again
Until the owls foretell the hour
When my lover will return.

— Rachel Smith

LIVING IN SIN
by Ian R. MacLeod
art: Janet Aulisio

Ian R. Macleod lives with his wife and baby daughter in England, where he works in the Civil Service. However, he is thinking of giving full-time writing a go. "Although to start with, it will probably involve a large amount of full-time baby-minding," he tells us.

He has sold stories to Interzone, Isaac Asimov's Science Fiction Magazine, and Weird Tales. This is his first story sale to Amazing® Stories.

I can still remember the last burning.

I was ten or maybe less. Too young to understand, but I knew it was something special. The priests chanting and the crowds pushing to see the man bound to the stake above the heaped pallets, old carpets, and parrafin-soaked newspapers. Everyone straining to catch some kind of understanding from his face, wondering how it must feel. And then the procession of torches up from the back of the tennis courts where the park keeper had his hut. The special darkness of the smoke lifting above the congregation and the hamburger stalls and the football pitches and the lines of coaches parked behind the houses. Everyone trying hard to stay quiet and listen for the screams that never came. My mother snatched my hand in the press of bodies, whispered that to God the smoke was like incense, he breathed it as the purest air. Took all that was bad into his great holy lungs and turned it into good. Pity the poor sinner, but pity more us poor mortals who must remain in the shame of our knowledge.

I've been living in sin with Annie these past twenty years. We're almost respectable. She's a non-destructive tester at Matsu Plastics on the industrial estate, and I started work there in sales, trying to get shopkeepers to stock the cheap icons we produce. Then I decided that shift supervisors had it easier, wandering around the shop floor, telling people what to do. The follies of youth. But that was how I met Annie, watching her between the vats and hydraulics with her white overalls stained yellow from the processes they use, then catching glimpses of her calves as we all knelt for blessing in the works chapel on the "A" lunch shift. Her hair was mostly red then, strands of it falling down from under her protective plastic cap in a way that seemed pretty to me. I was separated from my wife and living alone, in my late twenties and already drinking too much and putting on weight, loosing my hair. My early marriage had failed even before it began, and Annie's story wasn't much different. We started flirting, dating, going out for drinks. We fell in love.



Of course, we both knew that there was no chance of the Church granting annulments to the marriages that tied us, or blessing our union. But there was never any direct discrimination against us. We rented our two-bedroom terraced house across the road from the church of Saint Antony's almost as easily as anyone else might have done. The neighbours were friendly enough, sympathetic even. They nodded to us each morning as we all trooped, yawning, in our slippers to church for Matins. They let me borrow tools every winter when our pipes burst, and chatted over the hedge in spring. In the early days, Annie's hands often used to bleed from stigmata after we had made love. But that diminished, in honesty probably as our own passion lessened. Still, even after May was born, our chimney was licked by lightning every time there was a storm.

Annie having May changed a lot of things. Kneeling at the pews of Saint Antony's at Evensong whilst she was pregnant, we had prayed frantically that our baby would be ordinary. But still we were surprised as anyone when our prayers were answered. Who had ever heard of God blessing adulterers with an undeformed child?

The people at work began to share our table and play dominoes at lunch-time in the canteen, to kneel close to us along the lines of stacking plastic chairs in the works chapel. Mrs. Hewison next door in our terrace even knitted May a matinee suit from pink and lime-green acrylic she'd had left over from a cardigan. Once people saw May in her pram and realised that she wasn't obviously damaged or deformed, I think they all expected the kid to be special, to start reciting the Scriptures around the side of her dummy or piss holy water like the ones you read about in the papers. But it seemed that God had answered our prayers. He had given us fornicators an ordinary child. An ordinary life. He had reached down from the heavens and touched our brows with the sweat of ordinariness.

The days at Matsu Plastics dragged by. The years happened quickly. They flew, and all Annie and I could do was watch. And draw slowly apart. We loved May, but that became a thin thread as she grew older and went out with her friends and we began to share the house together alone with our age and our disappointments, the unbroken weight of our adulterous sin. Maybe if we could have gotten married, if the stigmata and the lightning hadn't returned every now and then to remind us. Maybe this, maybe that.

Sitting with the TV on and the evening paper spread on my lap, ashamed of the loose and heavy flesh it covered, with Annie slouched half asleep across the room and hating her for the silence and the ways she had let go of herself and the loose grey hair that fell from her bun, I could see the spire of Saint Antony's through the little bay window, crooked and beckoning like a finger. And I could hear down the street a young girl's laughter that was breathless and could have been May's. Then some kid too young for any sense gunning a motorcycle. Where in name of Lord Jesus did May go these evenings? Only the week before I'd walked into the bathroom and found her

standing there dripping and without a towel, looking like Aphrodite. I thought of the lads that sometimes came to the door nowadays, rawfaced with knuckled hands I couldn't bear to watch yet couldn't look away as they moved them restlessly. Said fine Sir if May's not in I'll just call tomorrow God willing. All those polite words to make me think they were good lads when I could see their hands and I know what lads were like Oh yes.

I tried to close my mind and watch the TV. The news was full of new miracles, the word of God spreading out from Europe and America, across the whole world. The sunset full of angels and cherubim above Cairo, the pillar of fire that had burned for three days and three nights in the Forbidden City. The newsreader was grinning. Oh, how foolish those foreigners must feel as they try to disguise their anguish and turn their creaky foreign minds towards the Faith!

I stood up and growled something about a walk, throwing the paper down deliberately loud and hard on my chair. Annie's eyes didn't flicker. They were closed, showing just thin glitter of white like a dog's when it's sleeping. I pulled on my old anorak and took the cigarettes that Annie wouldn't let me smoke at home from the pocket of my office jacket. I slammed the front door and it bounced back the way it always did. I pushed it gently shut.

Out in the street, the air was tainted with the scent of factories, smoke of chimneys, faded aftermath of the evening's cooking, and dog turds placed along the pavement like pieces from some new board game. A ripe smell, the feeling warm and close, intimate as your underclothes. The gunning motorcycle and the breathlessly laughing older kids had gone. Just a few young ones who should by rights have been in bed were rattling skateboards on a makeshift ramp between the cars, shouting fuck this and screw that and then crossing themselves just in case, and glancing back over their shoulders at the spire of Saint Antony's souring crookedly beyond the rusted railings.

The church rose over tombstones and trees. Blackened stone that was old enough to have been here when there was nothing but sweet green haze as far as the horizon, in days of saint and knight and dragon. The story was that the spire had been straight until Gideon Kenna — who was Lord of the Manor when there was still a Manor to be Lord of — took to the pulpit at Martins one bright Christmas and blasphemed. Said there was no God. Well, I mean, the church spire twisted at that very moment as a sign for all to see and has stayed twisted ever since.

But things were more easygoing now. There hadn't been a burning since that one in my youth. People used to take a stricter view. They believed that only flames could purify a soul so tormented as to reject God. And the pendulum was swinging back that way. Articles in the tabloids. Sermons from the priests. Prophets shouting in their rags about the decadence of our ways. These things come and go as God wishes, soft or strict, the other cheek or the plagues of Egypt, and if it sometimes seems that He changes His mind,

then we must remember that His ways are to us as our ways are to an ant. Terrible. Inexplicable. Undeniable.

I lit a cigarette and let the smoke lie on my tongue to take away the taste of the evening. Past the newsagents and then down the alleyway around the back of the houses, the pages of an old girlie mag were crumpled and splayed beside a bike-rutted puddle. Something the kids had gotten hold of, someone's daughter spread out there on the page, fading in the rain and the sun.

Why does He allow us to sin in these ways? I can still remember the terrors of my own youth: those sweet floods of sweat and pleasure followed nights of sleepless agony when my eyes literally wouldn't close. But his punishments are never quite strong enough. They join at the edges of our lusts and fears until sometimes, poor sinners that we all undoubtedly are, the pleasure and the pain becomes indistinguishable.

But May was out in the town. Out almost every evening, pecking at her dinner, her eyes deep and absorbed, glancing up occasionally with an odd kind of certainty that was enough to make you shiver, hair looking like it needed a wash even when she'd just done it. Oh yes, she was up to something. School didn't seem to count — her bedroom was a tip — and she went out straight after dinner and Evensong, saying she'd done her homework in break and Really Daddy everything is absolutely all right honestly. It's a free country isn't it. Surely Daddy you don't mind. With that smile that would melt butter and her eyes glinting as though the whole world was some secret that we shared. Just you and I Daddy. And I couldn't help thinking of her standing there in the bathroom and the wet sheen on her skin, that sweet kid. And that we were blessed and she'd never complained about being let's face it a bastard. And I had to look away and pretend that everything was fine, fine.

Maybe it's easier for girls. God gives them the blood of Eve, but he doesn't burden them with the lusts of the male. Mary smiles down from every church, when all a man can look up to is Christ in his last hot agony on the cross. I tossed my cigarette into a tangle of garbage bursting from a bin-bag behind the garages and crossed the allotments. No sign of the kids. Just a dog barking at its own echo off the backs of the houses, onion seed heads waving gently in no breeze at all.

Just where did May get to these evenings? Yes, I can remember what it was like, this thing of being young, the rooftops shining with possibility under a rosy sky. First flavor of beer, cigarettes, press of a tongue, and bland bacony taste of another's saliva. All part of growing up, growing old, and the things you did yourself and still you think no way will a kid of mine no way never. But God smiles on the hot follies of youth. He gave even me a sign when I was, oh, no more than fourteen. A toy Madonna, like the stuff we still make at Matsi Plastics, that I kept on top of my wardrobe with the dustballs and a model airship I'd never got around to finishing had spread

her tiny hands and glowed like starlight. She had smiled down at me, whispering words of sympathy and meaning that I couldn't quite catch. God had given me a sign. Then he looked away.

Through a gate beyond the allotments and down to High Street, a kid leaning on the bonnet of someone else's car caught me staring and gave me the finger. Another had spots and his arm up tight close to the breasts of a simpering girl who could have been May but thank God wasn't. Everything seemed to be quiet; the lights on at backs of the shops only made the grainy evening more empty. I turned down the footpath beyond the library and the public toilets into the municipal park, expecting the air to be sweeter and darker and greener. But instead there were crowds.

Kids and older people too, sitting on the grass, laughing, murmuring, pointing up toward the low hill that the Council had landscaped years ago for the kiddies' playground. What remained of the sun was streaming across the playing fields through distant chimneys and skeletal goalposts. No trick of the light that it should fall on May like the blind eye of a searchlight as she balanced miraculously atop the highest bar of the largest climbing frame. Her skin, her open duffle coat, the white of her blouse, her very eyes — all shades of gold. May talking, her voice everywhere and close to your ears as summer flies. Words of God, intricately speared on shafts of music and sunset.

May. Our kid. The baby we prayed at Saint Antony's beneath that crooked spire Please let it be fine and ordinary. And here I was where I could see for myself and laugh at my fears that my daughter was a slut. No slut no. She was in the park, drawing the crowds and talking sweet holy Jesus like a prophet. And the people were murmuring and smiling and raising their hands as a flock of starlings streamed over the swings and the slides and the bowling green to roost and the darkness rose up from the soft damp grass and swallowed their grins and their eyes and May was in light alone.

I broke away from the crowd and the golden buzzing in my ears, running like I hadn't run in too many years, slamming my knee like a fool straight into a park bench, limping the rest of the way back to High Street.

And into the nearest pub. Lucky I had enough money to get decently drunk. There was a fat bald guy beside me and another fat bald guy across the bar in the mirror. After a few beers I started talking to them both. About how we'd prayed for May but we should have known, and it's never the things you worry about with kids that actually happen.

Waddayaknow, my daughter's a prophet. You've seen them, my friend, looking crazed and thin, the hot light flooding out of their eyes. None of them last long. Pouring that much power into one soul is like lighting a candle with a blowtorch, putting rocket fuel into a moped. It burns them up. They shrivel down to the eyes and teeth and cheekbones. They go mad. Then they die and the angels weep and the clouds churn thunder and the stars fall from the heavens like dazzling snow. There was a prophet laid out

in our church for years when I was a kid, the bony body incorruptible and reeking of violets until somebody found the courage to give the thing a decent burial. It wasn't *natural*, it wasn't *human*. Who needs to go on about the existence of God when the evidence is all around? I suppose it draws the crowds for a while, gives them something to watch. But then so does a football match. And so does a burning.

I gave a belch. The fat bald guy in the mirror belched back at me. Finished my drink and started another, thinking of Gideon Kenna, late Lord of this Manor, when there was still a Manor to be Lord of. At least he took a risk, said something less than obvious from the pulpit at Saint Antony's on that dim and distant Christmas. Maybe it was just too much of ye mulled wine or the kids had been playing up and ungrateful about their presents the way kids always are. But it was bold, you know; he took a stand, right?

The fat guy on the right of me was talking at cross-purposes, but he nodded anyway. The whole bar was now doused in a golden haze not unlike the one that had illuminated May in the park but a whole lot more comfortable. People were getting sentimental and singing the old hymns the way you do after you've had a few. The way you do, at least, when your daughter's not a prophet. But we all have our troubles. Friend on the right was telling me that his wife had had would you believe it nine kids. They'd tried praying and fasting and contraceptives and everything but nothing worked, the things just kept on coming. I mean, you love them all when they come, but sweet Jesus why so many? Why? I slapped him on the back and struck out into the night.

Immediately I was outside, the anger that I'd been trying to swallow with the beer rose up. A prophet. This was my daughter. May. A prophet. Balancing on the climbing frame like a bird. Burning with light. Couldn't she have a life like anyone else? Maybe even take a few of those girlish risks that worried me as long as it was nothing too stupid and I didn't get to know. Then get married and stay married and have not too many kids. Go on holiday and walk the sea front and eat candyfloss and throw bread to the gulls. I looked up at the stars the way you sometimes do when you pray, even though God is everywhere. Please understand, I said to Him, I'd marry Annie if I could. Even looking the way she does now. You've got it wrong if you think you're punishing us with May, and if you're blessing us, please don't. You have to tell God these things sometimes, even though of course he already knows.

But tonight the stars weren't listening. They were dancing. Not the way the stars always do when you're drunk, but wheeling, spinning, swirling like the lights of a fairground. One or two other people hurrying home glanced up as well. I saw them shake their heads and cross themselves or just pretend it was nothing. There were celebrations in the heavens tonight. My daughter was a prophet. Hallelujah! She would spread the word of God.

The sky had settled down by the time I got back outside our house, stick-

ing to the main roads and avoiding the alleys just in case I got mugged by some poor sinner still searching for the Way. A few people back from the pub or who had slept in front of the TV for too long were scurrying through the gates of Saint Antony's, up the graveyard path to catch the last of evening Vigil and prayers. Automatically, I started across the road myself, then paused and stepped back to the pavement. I really had nothing left to say to God that evening that could safely be said in my own mind, let alone in church, and filled with this much beer, I was concerned that my stomach might betray myself. You risked being accused of trafficking with the Devil if you simply sneezed during services. I didn't like to think what would happen if you threw up over the pews. Staying away from church just this once seemed like the lesser risk. Everyone misses occasionally: after all, we are only human.

The lights were out at home. I made more noise than I intended getting into the hall. May's duffle coat wasn't back on the hanger. She was still out, spreading the word. I yanked off my shoes and crept up the worn stair carpet on fingers and toes, not that I cared about waking Annie, but it was a point of pride that she didn't hear me stumbling around drunk. I tiptoed along the landing and peered into May's empty room.

Drifts of starlight through the window. Things I'd been too wrapped up in myself to notice. White tears the Blutac had made on the wallpaper where she had peeled down all her posters of ponies and pop stars. The big crucifix that I'd been given free as a faulty molding from Matsi Plastics years before that now hung above her bed. I wondered whether she'd noticed that the nailed right hand had six fingers or whether she thought it was a sign. And maybe it was. Nothing was certain now. Even the air had lost the bedroom smells of slept-on sheets, spilled jars of cheap makeup, flesh, nylons drying on the radiator, and the cigarettes May sometimes used to smoke and thought we didn't realise. Instead, it was cold and sharp, like a church filled with flowers.

My daughter. May. My Jesus goddamn daughter. Annie grunted from our bedroom and turned over in her sleep. Somewhere, a car horn sounded. Now that my eyes had adjusted, I saw that the crucifix was glowing dimly, like a kiddies' nightlight. Jesus turned his plastic head towards me and smiled.

I stumbled back down the stairs. Sitting in the kitchen darkness with the cold formica table pressing my elbows, my fingers kneading my eyes, my daughter's sweet face gazed up at me from the well of the past. May amid the sparkle of the kiddies' swimming pool. Then holding a cold flannel to her forehead as she moaned and threw up next day, bilious from swallowing too much chlorine. And skipping beside us that wonderful misty day along the canal towpath. And May in church, praying with half a mind and half an eye like any other kid. And how proud we'd felt, thinking how we had been blessed with ordinariness even with all the sin in our lives. And May naked

from the bath, the sweet pink womanly flesh that made you proud and hurt and wondrous and ashamed.

I turned the kitchen radio on. This late at night when most of the stations have gone off the air you can hear the whisperings of souls. Those breathless lips, grey as moonlight. But even with the radio up high, I could only catch the odd word. Frost . . . candle . . . pain. The unforgiven dead, streaming across the night sky, searching for an entrance to heaven. Maybe Gideon Kenna was still up there too, tumbling over the sleeping rooftops and Saint Antony's twisted spire like a sycamore seed, flapping his clumsy medieval wings.

The beer was starting to wear off. I was wound up so tight that I could feel the skin of my cheeks and forehead stretching like drying leather. I wished there was some booze in the house. But I knew there wasn't. Annie never got any when she went to the supermarket; said I'd only go and drink it.

Then I heard the front door. May's breathing as she took off her shoes, her duffle coat.

"Why are you sitting in the dark?" she asked, standing in the kitchen doorway.

"How did you know I was down here?"

"Of course I knew."

I cringed as she clicked on the light. She raked a chair across the lino. Sat down opposite.

"This is far too late," I said, forcing my eyes up to meet hers. "No father lets his girl stay out this late."

"You know where I've been, Daddy. I'll always be safe as long as God is with me."

"Why didn't you tell us?"

She smiled. Soft pink lips that made me think of the color of her nipples as she stepped out from the bath, although the thought made me fill with shame. What sort of father was I? Jesus, some sort of pervert. She smiled again. She was gazing straight into me across the formica through the yellow kitchen light like I was made of dirty glass. Seeing all the things you would kill to hide.

"You've been drinking, Daddy. You shouldn't. It draws you away from God."

"Why you, May? You've got your whole . . ." My nose was suddenly starting to run from the beginning of tears. I wiped it with the back of my hand. Not caring I was a slob. ". . . whole life."

"This . . . my whole life?" She looked around at the kitchen, half smiling, half in tears herself. "This. We've got all eternity, Daddy." I realised suddenly that the radio was silent. Her presence must have frightened away the ghosts.

"God is waiting for us all," she said. "He cares, He even gives us signs so that we can be certain. But still people have to be told." She looked straight

at me, her eyes wet and bright and hot. "Still people have to be told."

"So evenings you go down to the park. That's the beginning." My voice started to tremble. "The people point and gather round. That's the beginning. You know what will happen, don't you?"

"One day God will break this vessel, just as he will break yours. Does it really matter how or when?"

I nodded and heard my neck creak and said nothing. But yes, it did matter. I was made from flesh and sin and folly, and May was my daughter . . . my beautiful, beautiful daughter. I loved her because of these things, not in spite of them. Even the foolish hurts and fears. The shameful things that make us weak and make us strong. And now something had possessed her that was power and knowledge beyond belief and all possible understanding. It smiled at me like plastic Jesus and slithered wet ropes of steel behind her eyes.

"Let's pray, Daddy," she said, taking my hands. Her cool fingers, sharp and dry. "We'll wait through the night. Go across to Saint Antony's together for Matins when the dawn comes. Let's be the first there. I love it when the light comes in on the darkness and the stained glass starts to glow."

And we waited. And the clock ticked in the lounge. And the house creaked gently. And light at the window brightened. And the milk carts rattled in the morning. And the kitchen was grease-stained walls, the faint smell of gas that I could never trace, the Brown and Polson clock that never told the time, scratches on the formica table, everything that shrank into ordinariness when you looked at it like a punctured balloon.

But May retained the power of the night.

"Come on, Daddy," she said. "Let's go."

"Your mother."

"Let Mummy sleep. There's time for everything."

We crossed the road. The air was fresh and clean now and the last of the stars were fading. I was in slippers and neither of us had bothered to change or put on coats. Sour sweat wafted up from my crumpled collar, but May's white blouse still glowed like something from a soap advert or a cheap religious painting. Her steps were light on the gravel path as we walked up through the graveyard. It was too early for shadows, but I felt the dark weight of Saint Antony's leaning out of the rosy sky. The spire seemed to tilt and sway.

Under the Norman arch I looked back beyond the railings toward the tight rows of houses. A few people were already starting to emerge, heading this way down the street. More front doors opened as I watched. Dogs began to bark, the sparrows began to chirp, lights came on behind yellow curtains. It was hardly six. The streets were waking up too early; normally you only got the crazies and the painfully devout in church for Matins at this time. But they were coming in a rambling stream through the swing gate, expressions of childish expectation on faces still stiff with sleep. They knew

that something was going to happen.

The church door was open as always. Gleam of gold and jewels at the far altar: precious riches that no one would ever dare to steal. I felt my way through the misty dimness, breathing the scent of hymn books and old stone, the faint acrid tang of violets.

"You always sit at the back, Daddy," May said.

"Not today." I shook my head.

At the transept where the tall stained glass was beginning to weep colour, the ancient pulpit was a castle of dark wood. I unhooked the rope that barred the steps, and climbed the spiral.

"... are you doing?" I heard May's stern voice behind me, but she didn't follow.

Looking down at her from twice my height from the top of the pulpit, I felt a reckless sense of freedom.

"You can't just..." She looked up at me with the slide of steel behind her eyes. Her voice grew lower, deeper, half inside my head. Commanding. "You cannot speak. Not here in My house."

I forced myself to look into those eyes. I saw everything and nothing. The open wound of eternity. "You gave me free will," I said. "To do what?"

"To worship Me. To do My will." Her lips moved awkwardly, like a poorly dubbed foreign film, but the sound was overpowering. The bones in my skull rattled like loose floorboards.

I swallowed once, then again. "And if I choose to exercise my own will. What will you do? Bring down the church, twist the spire like a kid in a tantrum? Destroy me? Haven't you done that already, given me a life where the days run and stick to one another like... like so much wet newspaper? Just who do you think you are, you bastard?"

May's face grew blank and almost ugly with puzzlement. The terrible power faded from her eyes. She looked crumpled and dowdy, her blouse in need of a change, her hair in need of a wash. Just a kid, just a kid.

"May," I said, "*I love you,*" knowing that He was still there, that He never went away, that He was still in me even as I defied Him. But perhaps there was still enough of the real me there to fight it.

"Look, Daddy," she raised her hands in a frustrated shrug. "Just what do you think you're going to do? This is so—" she glanced around at the fat, drunken pillars, the creamy white of the marble monuments on the walls — "so embarrassing."

Embarrassing. Yes, that was good; embarrassing. An ordinary human emotion. It was a victory. I smiled. Victory. I knew it couldn't last for long.

"Sit down," I said, waving a hand, getting the feel of being up here in the pulpit. "I just have something to say."

She was about to argue, but the door at the back of the church boomed open and the people began to pour in. I saw Mrs. Hewison from next door in one of her horrid cardigans, faces from work. And Annie was there, too,

shuffling in baggy socks like the old lady she had nearly become. They all looked up, but no one seemed that surprised to see me, the sinner, the adulterer, gazing down at them from the pulpit. The priest hurried in from the chancery, half in and half out of his cassock. May saw him and ran over, whispered something to him. I never knew what it was, but it was enough. He sat down with all the others.

The pews were full. May on the front row, looking up at me. I saw my own face in hers, and Annie's when she was younger and her hair was pretty and red. I saw joy and weakness, uncertainty and sin. The sun had risen now and light was pouring through the windows, gleaming on the balding heads and the spider webs of grey hair, the innocent and wicked, the upturned faces. The air was filled with the human smell of them all, like the taste of cigarettes and the night that was still in my mouth. I could hear the whisper of their lungs, their hearts pulsing.

Overhead, along the high roof, one of the wooden angels that buttressed the hammer beams shivered its dusty wings uneasily, like a bird keeping balance on a dipping branch. The fluttering spread amongst the others, a dry sound like paper twisting in a fire, like leaves blown across concrete. The congregation hardly bothered to look up, but to me it was a sign. I could almost feel the whole church tremble; the wood and the stones and the twisted dunce's cap of the steeple held together moment to moment by force and unreason.

I glanced down at the lectern in front of me. The pages of the Bible were laid open and marked, ready for the first reading of the day. Exodus 3:14. The part where Moses asks God how to describe Him to the Children of Israel. And God says, "Tell them I AM THAT I AM."

I closed the heavy pages. Dust drifted in the gathering sunlight. I opened my mouth, then checked myself. Normally — if there is a normally for a time such as this — I would have been a stammering, shivering wreck by now. But although the whole world and the heavens were against me and already I could smell the paraffin and feel the first hot tickle of the flames, I was strong. I imagined the ghost of Gideon Kenna. A sad but earnest face blotched with the sufferings of years, pushed one step too far along a road he didn't want to follow. His arms were supporting me, his fingers pushing me on. Age to age. One man to another with nothing but time and air between us. Wanting only to live in peace, to die and know the certainty of darkness. And I felt a hot surge in my blood. I felt my strength and knew that it was anger. Simple. Hot. Righteous. Anger.

I balled my fist and shook it at the roof and at the sky, at the trembling, fluttering angels. My voice echoed through the silence in a great and gathering howl. I wiped the spit from my lips with the back of my hand. Slob that I am.

I leaned forward over the lectern. I began to speak.

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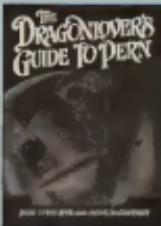
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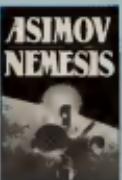
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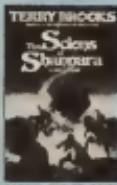
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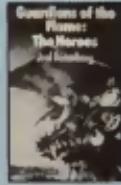
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